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BOTANICAL SERIES

FIELD MUSEUM OF NATURAL HISTORY
FOUNDED BY MARSHALL FIELD, 1893

VOLUME XVII NUMBER 4

A CONTRIBUTION TO THE FLORA OF HONDURAS

BY

T. G. YUNCKER
PROFESSOR OF BOTANY, DEPAUW UNIVERSITY

B. E. DAHLGREN
CHIEF CURATOR, DEPARTMENT OF BOTANY
EDITOR

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A CONTRIBUTION TO THE FLORA OF HONDURAS

T. G. YUNCKER

INTRODUCTION

In 1883 William Botting Hemsley published in the *Biologia Centrali-Americana* a catalogue of Central American plants. This publication, which lists all the plants then known from Central America, gives only about 160 species for Salvador and Honduras combined. Hemsley states that he included these countries in his list primarily to emphasize the great lack of knowledge regarding the plants of that area. Other than this very inadequate enumeration, practically nothing has been known of the flora of the Republic of Honduras until comparatively few years ago.

During the winter of 1927–1928 Paul C. Standley made a botanical exploration of the northern coastal region, and in 1931 published the *Flora of the Lancetilla Valley,*[1] a descriptive catalogue of the plants which he had found in the valley and in the vicinity of the nearby coastal town of Tela. This *Flora,* which covers a very limited territory, is the only general treatment which we now have of the plants of Honduras. He also has written *The Woody Plants of Siguatepeque*[2] from specimens and observations which he obtained on a brief collecting trip to the interior. E. B. Bartram has published a list[3] of the species of mosses collected by Standley. In 1927 Professor Samuel J. Record visited Honduras, making collections in the northern part of the country, and later published a list[4] of the trees. Other than these and a small number of additional papers mostly describing occasional new species discovered by various collectors, comparatively little work has been done toward producing a comprehensive flora of the country, and much of Honduras remains as yet a *terra incognita,* botanically speaking.

During July and August, 1934 collections were made by the writer in the Lancetilla Valley and Tela regions and to a lesser extent in the interior about the village of Potrerillos and in the

[1] Field Museum of Nat. Hist. Bot. Ser., vol. 10. 1931.

[2] Journ. Arnold Arboretum, vol. 9, no. 1. 1930.

[3] Field Museum of Nat. Hist. Bot. Ser., vol. 4, pp. 349-364. 1929.

[4] Tropical Woods, no. 10, June, 1927.

vicinity of Lake Yojoa. From June to the middle of August, 1936, with the assistance of Ray Dawson and Howard Youse, collections were made about the village of Siguateqepue and adjacent mountains in the Department of Comayagua. Siguatepeque was selected as the base from which to do our collecting mainly at the suggestion of Standley, who believed that many species new to science would be found in the mountains near there, and also because the climate and living conditions at that altitude are generally agreeable. The period of our visit coincided with the rainy season, but the rainfall was not sufficiently heavy to interfere greatly with our work. It is believed that a fairly representative collection of those plants in collectable condition during the period of our stay was obtained. Many plants both herbaceous and woody, especially numbers of orchids and bromeliads, were in neither flower nor fruit, and a period of collecting later in the season would undoubtedly yield a large number of additional species.

To reach the interior of the country one ordinarily lands at Puerto Cortés on the north coast. The fastest and most comfortable means of travel in the country is by airplane. The only other way of reaching the interior is to go by train to the inland terminus of the railroad at Potrerillos and then by motor-bus over a road indescribably poor.[1] The road goes by way of the beautiful Lake Yojoa, across which one must ferry. If one can overlook the annoyances occasioned by the poor condition of the road, the journey is of considerable interest, especially to a botanist, because of the great variety of vegetation through which one passes.

Siguatepeque is a quaint town of low, white-washed, Spanish-type adobe houses with weathered, red tile roofs, situated at 1,100 meters altitude near the eastern edge of a small, more or less circular plain. This plain, which is somewhat uneven and has occasional rocky outcroppings, is surrounded by mountains which to the southwest rise to an altitude of 2,000 or more meters. It is drained by exceedingly crooked streams which during the rainy season carry large amounts of water from the mountain slopes and have in many places cut gorges several feet in depth like miniature grand canyons.

When there is sufficient rain, the plain is covered with abundant short grass which affords excellent pasturage for considerable numbers of cattle, mules, and horses. Scattered here and there are farm

[1] Standley gives an interesting description of his journey over this road (Jour. Arn. Arb. 9:15. 1930). Our own experiences convince us that his comments are not exaggerations.

houses with gardens and small plantations of bananas and corn, but in the main the plain is devoted to the grazing of stock. During the rainy season numerous species of small herbaceous flowering plants, weedy and otherwise, are very abundant in the grassland. Scattered trees and a few small, shrubby species such as *Psidium*, *Lantana*, and *Acacia* occur in neglected pastures, marshy areas, and along occasional fence rows. Generally speaking, however, large woody plants are not abundant except as planted about dwellings or along the stream courses where a considerable number of woody as well as herbaceous species grow well. During the dry season, which ordinarily occurs between January and April, the soil is said to become very dry and powdery and to be blown about in clouds by any slight breeze. During this period the grass also dries up, and it becomes necessary to drive the stock to meadows at higher altitudes in the surrounding mountains to secure sufficient pasturage. Here and there on the plain small, marshlike areas are found where during the wet season occur many grasses, sedges, and other marsh species.

Rising from the edge of the plain and extending to 1,300 or 1,400 meters altitude is a range of more or less rocky foothills forested with a well-marked zone of *Pinus oocarpa* Schiede. The trees in this zone are almost exclusively coniferous with occasional deciduous trees or in some places are mixed with considerable numbers of oak. The stand is open and parklike, and to ascend through it, especially in early morning, is a delightful experience. The pines are mostly fine, tall, straight specimens occasionally reaching a diameter of a meter or more. During the wet season the forest floor is carpeted with various species of flowering plants and short grasses which provide excellent pasturage to large numbers of animals. It is reported that in the dry season this region is burned over each year, which, it is claimed, serves to destroy certain insect pests of the cattle and keep undershrubs from becoming established. This annual burning, together with the intensive grazing which is practiced, prevents any natural reforestration. Few young trees were observed and some of the old trees have succumbed to repeated fire wounds. The trees produce a good grade of timber which is used to a limited extent locally for corner posts, beams, etc. in construction of the adobe houses characteristic of the region. A small sawmill runs when required, though much of the material is cut on location by hand. The log is placed on a scaffolding, and one operator pulls the saw from beneath while another stands on the log. A small

amount of resin which is distilled and used locally is collected from the trees.

Originally a dense growth of deciduous forest extended from the upper limits of the pine zone to the summit of the principal mountain range. Much of the original forest has been destroyed, however, and at the present time, between the lower pine-clad ridges and the main range capped with deciduous virgin forest, lie gently to steeply sloping pastures and cornfields cut here and there with deep, steep-sided ravines through which swiftly descending mountain streams dash over rocks as steep cataracts. In these gorges, densely shaded by overhanging tree tops and wet with the spray of waterfalls, one finds the original vegetation surviving. Giant tree ferns, Heliconias, arums, bromeliads, orchids, and many other herbaceous and woody species grow in great profusion to produce a dense entanglement through which one often needs to cut one's way. In this intermediate zone one also discovers occasional subalpine boggy areas exhibiting characteristic and interesting species.

This intermediate cleared zone, fringed principally with pine and scrub oak at the lower edge, gives way to the more steeply rising ridges and gulches of the highest range of peaks still covered for the most part with deciduous forest. Each year sees additional areas being fired and cleared for planting, with the result that in a comparatively short time most of the original deciduous forest as well as the lower pine belt will have been destroyed, with the original vegetation surviving only on the highest and steepest mountain peaks and in ravines unsuited for agricultural purposes. Such deforestation will likely bring about extensive erosion and serious destruction of land now useful for agricultural purposes, as well as have an effect on the rainfall.

In the forest at the summit giant, smooth-barked trees with wide buttresses predominate. Their tops, which often meet far overhead to produce a canopy through which the sun rarely penetrates, carry great numbers of epiphytes on their branches. These ordinarily are accessible to collectors only when a branch breaks off in a storm because of the excessive load which it carries. The understory is made up of many species of small trees, shrubs, palms, arums, lianas, etc., which often form an entanglement of considerable density, or in some places the forest may be more open. The forest floor is overspread with deep, damp humus, rotting logs, and entangled brush and vines. The logs and tree trunks are covered with ferns, Peperomias, arums, and other low or creeping plants forming

a matted growth with numerous species of mosses, liverworts, and lichens.

The list of plants presented in this paper includes, in addition to the plants collected about Siguatepeque in 1936, those obtained in 1934 about Potrerillos and Lake Yojoa. Included also are those species found in the Lancetilla-Tela region not previously reported by Standley in his *Flora*. A list of over one hundred species cultivated in and about Siguatepeque is not included, and a number of common garden and street weeds observed about the village is also omitted.

In the list those species collected on the plains about Siguatepeque are commonly cited without any indication of locality. El Achote, given as the station for many species, is an area in the mountains near the upper edge of the pine forest belt at about 1,350 meters altitude. The summit of the range above El Achote, which is frequently enveloped in clouds, rises to an altitude of about 2,000 meters. El Rincón is a region about 12 kilometers west of Siguatepeque at the edge of the summit forest about 1,400 to 1,500 meters altitude.

In the preparation of this list I have become greatly indebted to the following specialists who have assisted by identifying and verifying specimens as well as generously allowing the inclusion of the descriptions of new species which were discovered: Mr. A. H. G. Alston (*Selaginella*); Prof. Oakes Ames (Orchidaceae); Mr. E. B. Bartram (Musci); Dr. S. F. Blake (Compositae); Mrs. Agnes Chase (Gramineae); Dr. C. W. Dodge (lichens, excluding *Cladonia*); Prof. A. W. Evans (*Cladonia*); Mr. E. P. Killip (Passifloraceae); Mr. E. C. Leonard (Acanthaceae); Dr. W. R. Maxon (Pteridophyta); Mr. C. V. Morton (Smilacaceae and Gesneriaceae); Dr. L. B. Smith (Bromeliaceae); Dr. William Trelease (Piperaceae, *Phoradendron*, and *Quercus*). I am especially indebted to Mr. Paul C. Standley, who not only identified or verified most of the remaining numbers and contributed critical notes to many species as well as the descriptions of several new species, but who also gave much helpful advice and information about the country and the conditions prevailing there. To Messrs. Ray Dawson and Howard Youse who assisted me on the 1936 expedition I wish to express my sincere appreciation. One could not wish for more capable assistants and more cheerful companions. I am also grateful to Dr. Wilson Popenoe and other officials of the United Fruit Company who freely gave advice and assistance whenever possible.

An almost complete set of the specimens upon which this paper is based is deposited in the Herbarium of Field Museum.

LIST OF GENERA AND SPECIES

LICHENES

CHIODECTONACEAE

CHIODECTON Ach.

Chiodecton sanguineum (Sw.) Vainio. On tree trunk at El Achote.

PANNARIACEAE

COCCOCARPIA Pers.

Coccocarpia cronia var. **isidiophylla** (M. A.) Dodge. On tree trunk.

PANNARIA Del.

Pannaria lurida (Mont.) Nyl. On tree trunk, summit of the range above El Achote.

STICTACEAE

LOBARIA (Schreb.) Hue

Lobaria conformis Vainio. On tree trunk near El Achote.

STICTA Schreb.

Sticta clathrata Dutr. On tree trunk.

Sticta laciniata (Sw.) Ach. On log, near the summit of the range above El Achote.

Sticta Pickeringii Tuck. On tree trunk.

STICTINA (Nyl.) Hue

Stictina carpoloma (Del.) Nyl. On tree trunk near the summit of the range above El Achote.

PELTIGERACEAE

PELTIGERA Willd.

Peltigera polydactyla (Neck.) Hoffm. On a moist bank in a ravine near El Achote.

CLADONIACEAE

CLADONIA Hill

Cladonia chlorophaea (Floerke) Spreng. Wet soil, river bank.

Cladonia corymbulosa Nyl. On rotten log, ravine at El Achote.

Cladonia cristatella Tuck. On fence slats.

Cladonia didyma (Fée) Vainio. On log near El Achote.

Cladonia fimbriata (L.) Fries. On log near El Achote.

Cladonia fimbriata var. **Balfourii** (Cromb.) Vainio. On a tree trunk near El Achote.

Cladonia fimbriata var. **chondroidea** Vainio. On soil.

Cladonia Floerkeana (Fries) Sommerf. On tree trunk.

Cladonia furcata var. **pinnata** (Floerke) Vainio, f. *truncata.* On log, top of the range above El Achote.

Cladonia pityrea (Floerke) Fries. On tree trunk near El Achote.

Cladonia subcariosa Nyl. On dry soil.

PARMELIACEAE

PARMELIA Ach.

Parmelia americana Mey. & Flot. On log near the summit of the range above El Achote.

Parmelia capitata Lynge. On fence pickets.

Parmelia cristifera Tayl. On tree trunk.

Parmelia latissima Fée. On fence post.

Parmelia pseudoflavescens Zahlbr. On fence pickets.

Parmelia subrugata Nyl. On tree trunk near El Achote.

Parmelia tinctorum Despr. On fence slat.

USNEACEAE

RAMALINA Ach.

Ramalina alludens Nyl. On tree trunk near El Achote.

Ramalina attenuata Pers. On tree trunk.

Ramalina yemensis (Ach.) Nyl. On tree trunk.

PHYSCIACEAE

ANAPTYCHIA Koerb.

Anaptychia leucomelaena (L.) Vainio. On fence post.

Anaptychia leucomelaena var. **albociliata** Nyl. On tree trunk.

Anaptychia podocarpa var. **conferta** Vainio. On tree trunk.

PHYSCIA Ach.

Physcia segilata (Ach.) Nyl. On tree trunk.

Physcia syncolla Tuck. On tree trunk.

MUSCI

FISSIDENTACEAE

FISSIDENS Hedw.

Fissidens reclinatulus C. M. On moist bank, ravine near El Achote.

LEUCOBRYACEAE

OCTOBLEPHARUM Hedw.

Octoblepharum albidum Hedw. On rotten log near El Achote.

POTTIACEAE

GLOBULINA C. Muell.

Globulina globulifera (Hpe.) C. M. New for Honduras. On a dry bank, plains east of Siguatepeque.

FUNARIACEAE

FUNARIA Schreb.

Funaria calvescens Schwaegr. On soil.

BRYACEAE

BRYUM Dill.

Bryum andicola Hook. On moist bank, in a ravine near El Achote.

Bryum argenteum Hedw. var. **lanatum** Bry. Eur. On rotten log.

BARTRAMIACEAE

PHILONOTIS Bridel

Philonotis tenella (C. M.) Besch. On moist bank.

ORTHOTRICHACEAE

MACROMITRIUM Bridel

Macromitrium longifolium (Hook.) Brid. New for Honduras. On a rotten log near El Achote.

Macromitrium mucronifolium (Hook. & Grev.) Schwaegr. On tree trunk.

Macromitrium Podocarpi C. M. On log near El Achote.

Macromitrium Sumichrasti Dub. New to Honduras. On a tree trunk near El Achote.

MICROMITRIUM Aust.

Micromitrium fragile (Mitt.) Jaeg. On log.

SCHLOTHEIMIA Brid.

Schlotheimia Mohriana C. M. On bank of stream.

Schlotheimia Sartorii C. M. On tree trunk.

RHACOPILACEAE

RHACOPILUM P. de Beauv.

Rhacopilum tomentosum (Hedw.) Brid. On wet bank.

RHIZOGONIACEAE

RHIZOGONIUM Bridel

Rhizogonium spiniforme (Hedw.) Bruch. On a rotten log near El Achote.

METEORIACEAE

PAPILLARIA (C. Muell.) C. Muell.

Papillaria nigrescens (Sw.) Jaeg. On tree trunk.

FABRONIACEAE

FABRONIA Raddi

Fabronia flavinervis C. M. On fence rails and tree trunks.

THUIDIACEAE

RAUIA Aust.

Rauia subcatenulata (Schp.) Broth. On tree trunk.

THUIDIUM B. & S.

Thuidium delicatulum (Hedw.) Mitt. On a log, summit of the range above El Achote.

ENTODONTACEAE

ERYTHRODONTIUM Hamp.

Erythrodontium longisetum (Hook.) Par. On tree trunk.

SEMATOPHYLLACEAE

RHAPHIDORRHYNCHIUM Besch.

Rhaphidorrhynchium Lindigii (Hpe.) Broth. On log.

SEMATOPHYLLUM Mitten

Sematophyllum caespitosum (Hedw.) Mitt. Common on soil.

Sematophyllum cuspidiferum Mitt. New to Honduras. On rock.

Sematophyllum galipense (C. M.) Mitt. On tree trunk.

HYPNACEAE

MITTENOTHAMNIUM Hennings

Mittenothamnium diminutivum (Hpe.) E. G. Britt. On wet banks and rotten logs.

Mittenothamnium Lehmanii Besch. On tree trunk.

ISOPTERYGIUM Mitten

Isopterygium tenerum (Sw.) Mitt. On rotten log.

CTENIDIUM (Schimp.) Mitten

Ctenidium hondurense Edwin B. Bartram, sp. nov.—*C. mollusco* (Hedw.) Mitt. forsan proximum, differt foliis breviter acuminatis, fortiter plicatis, tenuibus denticulatis.

Probably dioicous, male flowers not seen. Rather robust, soft, laxly tufted plants, green with a tinge of brown, slightly glossy. Stems irregularly pinnately branched. Leaves crowded, strongly falcate-secund with circinate tips; stem leaves up to 1.5 mm. long and 0.7 mm. wide, lanceolate from an auriculate, broadly cordate base, slightly decurrent, short-acuminate, deeply plicate, denticulate all around; costa double, well defined, extending about one-third of the way up the leaf; cells linear with rounded ends, 3–4μ wide and 8–12 times as long, with firm walls, shorter and irregularly rectangular at the basal angles and across the leaf insertion; branch leaves slightly smaller, from an oblong-ovate, scarcely cordate base, short-acuminate, strongly plicate. Perichaetium large; inner perichaetial leaves erect, ecostate, not plicate, up to 4.5 mm. long, gradually narrowed to a long, filiform, slightly denticulate point; seta 12 mm. long; capsule horizontal, oblong, about 2 mm. long. Peristome, lid, and calyptra unknown.

HONDURAS: On a log near El Rincón, about 10 miles west of Siguatepeque, 1,400–1,500 meters altitude, Department of Comayagua, July 24, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6608.*

While evidently near *C. molluscum*, this species differs in several noteworthy particulars. Both the stem and branch leaves are rather broadly short-acuminate and very strongly plicate; the costa is well developed with the forks extending some distance up the leaf, and the perichaetium is large and conspicuous.

POLYTRICHACEAE

ATRICHUM Beauv.

Atrichum angustatum (Brid.) Bry. Eur. var. **Mulleri** (Schp.) Bartr. On soil.

OPHIOGLOSSACEAE

OPHIOGLOSSUM L.

Ophioglossum crotalophoroides Walt. On a moss-covered rock in a wet ravine near El Achote.

Ophioglossum reticulatum L. Rich soil, river bank, about 6 kilometers west of Siguatepeque.

MARATTIACEAE

MARATTIA Sw.

Marattia excavata Underw.? In forest, summit of the range above El Achote.

OSMUNDACEAE

OSMUNDA L.

Osmunda cinnamomea L. (form). Subalpine bog near El Achote.

Osmunda regalis L. Subalpine bog near El Achote.

SCHIZAEACEAE

ANEMIA Sw.

Anemia adiantifolia (L.) Sw. On a rocky cliff near Potrerillos.

Anemia humilis (Cav.) Sw. On a rocky cliff in pine forest.

Anemia pastinacaria Moritz. In wet soil, pine forest.

Anemia Phyllitidis (L.) Sw. Terrestrial, wet ravine near El Achote.

LYGODIUM Sw.

Lygodium polymorphum (Cav.) HBK. Climbing in a thicket near Potrerillos.

GLEICHENIACEAE

DICRANOPTERIS Bernh.

Dicranopteris pectinata (Willd.) Underw. Scrambling over shrubs in thicket on river bank in pine forest.

HYMENOPHYLLACEAE

HYMENOPHYLLUM J. E. Sm.

Hymenophyllum asplenoides Sw. On a tree in forest at the summit of the range above El Achote.

Hymenophyllum fucoides Sw. On a tree in forest at the summit of the range above El Achote.

Hymenophyllum polyanthos Sw. On a tree in forest at the summit of the range above El Achote; also on trees and logs in a wet ravine near El Achote.

TRICHOMANES L.

Trichomanes capillaceum L. On a tree in forest at the summit of the range above El Achote.

Trichomanes montanum Hook. On a tree in forest at the summit of the range above El Achote.

Trichomanes radicans Sw. var. On a tree in forest at the summit of the range above El Achote.

Trichomanes rigidum Sw. On side of a wet ravine near El Rincón.

DICKSONIACEAE

CIBOTIUM Kaulf.

Cibotium regale Versch. & Lem. Leaves up to 2 meters in length, the base covered with abundant, golden-brown hairs. Bottom of a dark, wet ravine near El Achote.

CYATHEACEAE

ALSOPHILA R. Br.

Alsophila mexicana Mart. Trunk up to 4.5 meters tall and 12–14 cm. in diameter. Leaves 2–3 meters in length, the base covered with thin, brown scales. In forest at the summit of the range above El Achote.

Alsophila Schiedeana Presl. Trunk about 2 meters tall and 10–15 cm. in diameter. In forest at the summit of the range above El Achote; also in a wet ravine near El Rincón.

CYATHEA Sm.

Cyathea mexicana Schlecht. & Cham. Trunk about 2 meters tall. Leaves up to 2 meters in length, armed and with narrow, brown scales at the base. In spray of waterfalls, bottom of a wet ravine near El Achote.

HEMITELIA R. Br.

Hemitelia costaricensis (Klotzsch) Mett. Trunk about 1 meter tall and 7 cm. in diameter. In a dry gulch, hills east of Siguatepeque.

POLYPODIACEAE

ACROSTICHUM L.

Acrostichum daneaefolium Langsd. & Fisch. In water, edge of a marsh near Tela.

ADIANTOPSIS Fée

Adiantopsis radiata (L.) Fée. On a wet cliff, river bank.

ADIANTUM L.

Adiantum concinnum H. & B. On a wet cliff in a ravine near El Achote.

Adiantum tenerum Sw. In crevices of a rocky cliff near Potrerillos.

Adiantum trapezoides Fée. In a wet ravine near El Achote.

ASPLENIUM L.

Asplenium auritum Sw. On a tree near the shore of Lake Yojoa; also in a wet ravine near El Achote.

Asplenium cristatum Lam. Bottom of a wet ravine near El Achote.

Asplenium formosum Willd. On a tree near the shore of Lake Yojoa.

Asplenium miradorense Liebm. On a rotten log in forest at the summit of the range above El Achote.

Asplenium praemorsum Sw. On a tree, river bank.

Asplenium radicans L. var. **partitum** (Klotzsch) Hieron. Terrestrial. In a wet ravine near El Achote.

Asplenium serra Langsd. & Fisch. On a log in deep forest near the summit of the range above El Achote.

Asplenium serratum L. On a tree near the shore of Lake Yojoa.

BLECHNUM L.

Blechnum occidentale L. In a wet ravine near El Achote.

Blechnum unilaterale Sw. Rock hillside, beneath pine trees.

CHEILANTHES Sw.

Cheilanthes angustifolia HBK. In wet soil in pine forest, above the plains of Siguatepeque.

DENNSTAEDTIA Bernh.

Dennstaedtia globulifera (Poir.) Hieron. On a wet cliff, ravine near El Achote.

Dennstaedtia rubiginosa (Kaulf.) Moore. In a forest on a ridge above Lancetilla Valley.

DIDYMOCHLAENA Desv.

Didymochlaena truncatula (Sw.) J. Sm. In a wet ravine near El Rincón.

DIPLAZIUM Sw.

Diplazium Donnell-Smithii Christ. In a wet, shady ravine near El Achote.

DRYOPTERIS Adans.

Dryopteris denticulata (Sw.) Kuntze. In cloud-zone forest at the summit of the range above El Achote.

Dryopteris effusa var. **divergens** (Willd.) Hieron. In a ravine near El Achote.

Dryopteris Hemsleyana (Baker) C. Chr. In cloud-zone forest at the summit of the range above El Achote.

Dryopteris interjecta C. Chr. In a wet ravine near El Achote.

Dryopteris Linkiana (Presl) Maxon. In a wet ravine near El Achote.

Dryopteris melanochlaena C. Chr. In a wet ravine near El Achote.

Dryopteris nicaraguensis (Fourn.) C. Chr. Bottom of a wet ravine near El Achote.

Dryopteris normalis C. Chr. Side of a ravine near El Achote.

Dryopteris oligocarpa (H. & B.) Kuntze. In a subalpine bog near El Achote.

Dryopteris patula (Sw.) Underw. On rocky hillsides near El Achote.

Dryopteris pseudosancta C. Chr. On river bank.

Dryopteris resiliens Maxon, sp. nov.—Sect. *Goniopteris*. Certe *D. paucijugae* proxima, a qua differt: rhizomatis paleis fere glabris; lamina ambitu late lanceolata; pinnis multijugis profundius pinnatifidis, superioribus gradatim minoribus sed conformibus et sessilibus,

laminae apice breviter acuminato paucilobato; segmentis longioribus et plerumque falcatis, nunquam truncatis; segmentorum majorum venis 10–13-jugis, basalibus non conniventibus; soris indusiis fulvis nec fusco-vinaceis praeditis; parenchymate membranacea et verruculosa, nec herbacea et laevi.

Rhizome horizontal or creeping, woody, 5–8 cm. long, about 1 cm. thick, bearing numerous stout roots throughout, obscurely paleaceous at apex, the scales very few, cucullate, coherent, subovate, 3–5 mm. long, yellowish brown, thin, entire, nearly glabrous. Fronds 4–10, subfasciculate, 40–70 cm. long, arching, the stipes about as long as the blades, slender, dull stramineous, with a thin covering of minute, stalked, stellate hairs; blades 20–35 cm. long, 12–20 cm. broad, lanceolate to lanceovate, pinnate nearly throughout, only the short, abruptly acuminate apex pinnately lobed; pinnae numerous (15–19-jugate), sessile, the 2 or 3 lowermost pairs sharply deflexed, these the largest, 8–12 cm. long, 1.5–3 cm. broad, lance-attenuate, obliquely pinnatifid two-thirds the distance to the costa or more, inequilateral at base, subauriculate, the distal segment often nearly free, the segments in general mostly oblong or linear-oblong, falcate or subfalcate, 4–5 mm. broad at base, distally acutish; other pinnae narrowly oblong, mostly from a slightly broader base, the upper ones gradually smaller but conform, one or more often viviparous at base; costae and costulae minutely puberulous beneath, the hairs both simple and stellate; veins of larger segments 10–13 pairs, distant, oblique, elevated, glabrate, simple or a few of the distal ones acutely forked midway to the margin, the arcuate basal ones running out nearly or quite to the sinus but never connivent; sori medial, small, distant; indusia yellowish brown, firm, rigidly ciliolate, persistent. Leaf tissue membranous, grayish green, verruculose throughout.

Type in the U. S. National Herbarium, No. 1,309,047, collected in Lancetilla Valley, near Tela, Department of Atlántida, Honduras, altitude 20–600 meters, in wet forest, Dec. 26, 1927 to March 20, 1928, by Paul C. Standley (No. 52,893). Other material at hand is as follows:

HONDURAS: Lancetilla, alt. 20–600 meters, *Yuncker 4609; Standley 52894, 53977, 54578, 54873; Chickering 142; Pauline Ames 52, 61, 74, 77.* Puerto Arturo, near Tela, *Pauline Ames 177.* Near Puerto Castilla, *Pauline Ames 87.* Río Pelo, Cordillera de Mico Quemado, Dept. Yoro, alt. 60–380 meters, *Pauline Ames 135, 138, 139.* Near Ceiba, alt. 120 meters, *Dyer A223.* Río Bermejo, Dept. Santa Bárbara, alt. 180 meters, *J. D. Smith 5698* (leg. *C. Thieme*).

MEXICO: Ixtacomitán, Chiapas, alt. 120 meters, Sept. 27, 1887, *Rovirosa 51*.

Most of this material belongs to recent collections. Of the specimens cited only the last two were seen by Dr. Christensen, and not unnaturally were referred by him to *D. paucijuga* (Kl.) C. Chr., a species properly to be restricted to Tobago, Trinidad, and Venezuela. The relationship is close, yet in the light of recent material *D. paucijuga* may always be distinguished by its relatively broad, subdeltoid blades, which also are gradually narrowed to an elongate, lobate apex, its much fewer and less deeply pinnatifid pinnae, its closer and often truncate segments, its subfuscous indusia, and its smooth, thicker leaf tissue. Moreover, the rhizome scales are easily seen and are conspicuously stellate-pubescent, whereas in *D. resiliens* it is hard to find so much as a single stellate hair upon the scales, which are few, closely packed, and nearly concealed at the apex of the rhizome. Habitally the two species are alike, especially in their several very strongly deflexed basal pinnae. In *D. resiliens* the viviparous condition is more pronounced. A single frond often bears 2 or 3 buds upon the upper rachis, these producing good-sized plants, in one instance a young plant (still attached) of 9 fronds measuring up to 12 or 13 cm. long.

Dryopteris resinifera (Desv.) Weatherby. On rock outcropping.

Dryopteris subincisa (Willd.) Urban. In a wet ravine near El Achote.

ELAPHOGLOSSUM Schott

Elaphoglossum rampans (Baker) Christ. In a wet ravine above El Achote.

Elaphoglossum rubescens (Kuhn) Christ. On a tree in forest near El Achote.

Elaphoglossum scolopendrifolium (Raddi) J. Sm. On a rotten log in forest at the summit of the range above El Achote.

Elaphoglossum tectum (H. & B.) Moore. In a subalpine bog near El Achote.

HECISTOPTERIS J. Smith

Hecistopteris pumila (Spreng.) J. Sm. On a tree in forest above Lancetilla Valley.

HEMIONITIS L.

Hemionitis pinnatifida Baker. In shade, river bank.

LINDSAYA Dryander

Lindsaya quadrangularis Raddi. In a wet ravine near El Rincón.

MAXONIA Christensen

Maxonia apiifolia (Sw.) C. Chr. var. **dualis** (Donn. Sm.) C. Chr. Bottom of ravine near El Achote.

NEPHROLEPIS Schott

Nephrolepis cordifolia (L.) Presl. In a dark, wet ravine near El Achote.

Nephrolepis pendula (Raddi) J. Sm. On a dead tree near the shore of Lake Yojoa.

ODONTOSORIA (Presl) Fée

Odontosoria Schlechtendalii (Presl) C. Chr. Fronds 1–1.5 meters long, arching over a stream in a wet, shady ravine near El Achote.

PITYROGRAMMA Link

Pityrogramma calomelaena (L.) Link. In thicket on river bank.

Pityrogramma Schaffneri (Fée) Weatherby. On river bank in shade.

Pityrogramma tartarea (Cav.) Maxon. On side of a wet ravine near El Achote.

POLYPODIUM L.

Polypodium angustifolium Sw. On a tree along river bank.

Polypodium angustum (H. & B.) Mett. On a tree in wet ravine near El Achote.

Polypodium apiculatum Kunze. On a tree in dense forest at the summit of the range above El Achote. A species of northern South America, previously known otherwise only from Hispaniola.

Polypodium asplenifolium L. On a tree in wet ravine near El Rincón.

Polypodium astrolepis Liebm. On a tree, river bank near Siguatepeque; also on a tree near the shore of Lake Yojoa.

Polypodium carpinterae Rosenstock. In a wet ravine near El Achote; also at El Rincón. Known previously only from Costa Rica.

Polypodium crassifolium L. In a wet ravine near El Achote.

Polypodium cryptocarpon Fée. On a tree near Lake Yojoa.

Polypodium cultratum Willd. On a tree in forest at the summit of the range above El Achote.

Polypodium delitescens Maxon. On a tree in dense forest at the summit of the range above El Achote. New to Honduras; common in the high mountains of Jamaica, and known previously also from Alta Verapaz, Guatemala.

Polypodium dissimile L. On the ground in forest at the summit of the range above El Achote.

Polypodium fraternum Schlecht. & Cham. On a rock in pine forest near El Achote.

Polypodium induens Maxon. On a tree in forest, summit of the range above El Achote.

Polypodium Lindenianum Kunze. On a tree near Lake Yojoa.

Polypodium loriceum L. On a rotten log in forest near the summit of the range above El Achote.

Polypodium montigenum Maxon, sp. nov.—Sect. *Eupolypodium.* Epiphyticum, e turma *P. plebeii,* facie *P. plebeium* ipsum praecipue simulans, a quo differt: rhizomatis paleis admodum obliquis et adpresso-imbricatis, non anguste et crasse atro-carinatis, marginibus pallidis teneris angustioribus et planis numquam complicato-crispis; laminis pinnatis, nec pinnatifidis; stipite et rhachibus non foliaceo-marginatis subpersistente adpresso-paleaceis. Fortasse *P. leucosticto* propius, sed rhizomate longe repente libero paleis non atro-carinatis angustioribus onusto, frondibus distantibus nec fasciculatis, laminis pinnatis nec pinnatifidis, segmentis non dilatatis inter alia sat recedit.

Epiphytic; rhizome rampant, loosely attached by a few distant, wiry roots, largely free, 30–40 cm. long, 3–5 mm. thick, flattish and shallowly sulcate in drying, divaricately branched, persistently paleaceous; scales very oblique, closely appressed-imbricate, lance-subulate, 3–4 mm. long, 1–1.5 mm. broad, dark castaneous, with thin, pale, plane, fimbriate borders, or the underlying ones ovate-attenuate, with broader borders, the scales thus bicolorous, the broad, subopaque, median stripe percurrent. Fronds conform, mostly distant, 20–50 cm. long, straight; stipes mostly a little

shorter than the blades, 1–2 mm. thick, bisulcate, dull castaneous, thinly and deciduously appressed-paleaceous; blades mostly 15–30 cm. long, 6–14 cm. broad, imparipinnate, the pale castaneous rachis lightly marginate, deciduously paleaceous; pinnae chartaceo-coriaceous, 10–16 pairs, spreading, straight or subarcuate, adnate (upper ones slightly decurrent), the fertile ones linear, 2–4 times their width apart, mostly 4–7 mm. broad, acutish, the sterile ones closer, broader (7–10 mm., rarely 15 mm. near middle), narrowed toward base, sublanceolate, attenuate toward apex; margins cartilaginous, faintly and remotely notched or, in large, sterile pinnae, sometimes broadly serrulate; veins free, concealed, oblique, twice-forked; pinnae punctate-paleaceous beneath, the scales distant, appressed, 0.5–1 mm. long, long-attenuate from a subtriangular base, light castaneous, with deeply toothed, pale margins; sori 10–16 pairs, uniserial, yellowish brown, globose, large (2–3 mm. in diameter), medial, usually contiguous, often touching both midrib and margin.

Type in the U. S. National Herbarium, No. 1,182,092, collected from a tree trunk at edge of forest, along cart road from Vara Blanca (between Poás and Barba volcanoes) to La Concordia, Costa Rica, alt. 1,600–1,950 meters, July 23, 1923, by William R. Maxon and Alfred D. Harvey (No. 8479). A second specimen of this collection has afforded data regarding the sterile fronds. Additional material examined is as follows:

HONDURAS: Summit of range above El Achote, Dept. Comayagua, alt. 1,800 meters, *Yuncker, Dawson & Youse 6140.*

COSTA RICA: Volcán de Barba, at 2,400–2,800 meters, *M. Valerio 34, A91, 197.* Volcán de Irazú, at 2,300 meters altitude, *Pittier 840;* crater of volcano, *Jiménez 1154* (greatly reduced). Volcán de Turrialba, alt. 2,000–2,500 meters, *Pittier 13257* (*J. D. Smith 7487*); *Standley 35059.* Santa Clara de Cartago, alt. 1,950 meters, *Lankester 743, 901; Maxon & Harvey 8200.* Las Nubes, Prov. San José, alt. 1,500–1,900 meters, *Standley 38781.*

PANAMA: Cordillera above Camp I, Holcomb's Trail, above El Boquete, Prov. Chiriquí, alt. 1,800–2,000 meters, *Killip 5301.*

Habitally *P. montigenum* suggests *P. plebeium* Schlecht. & Cham., but that species is at once distinguished by its pinnatifid blades, its closer and truly dilatate segments, and its shaggy, squarrose-paleaceous rhizomes, upon which the scales are densely packed, broad, with a thick, very narrow, sharply elevated percurrent, black median stripe, and with very broad, pale, ruffled borders. The relationship to *P. leucosticton* Kunze is perhaps somewhat closer, but aside from

scale characters, that differs notably in its dimorphic, fasciculate fronds, green-margined stipes, dilatate segments, and short, thick, densely felted-radicose rhizomes.

Polypodium plumula H. & B. On a rotten log in a wet ravine near El Rincón; also at the summit of the range above El Achote.

Polypodium polypodioides (L.) Watt. On a tree in a wet ravine near El Achote.

Polypodium rhodopleuron Kunze. On a tree in a ravine near El Achote.

Polypodium trichomanoides Sw. On a tree in dense forest at the summit of the range above El Achote. New to Honduras; common in the higher mountains of Jamaica, but otherwise known previously only from a single collection from Alta Verapaz, Guatemala.

Polypodium triseriale Sw. On a tree near the summit of the range above El Achote; also on a tree near Lake Yojoa.

POLYSTICHUM Roth

Polystichum platyphyllum (Willd.) Presl. In a wet ravine near El Achote.

PTERIDIUM Scop.

Pteridium aquilinum (L.) Kuhn, var. **Feei** (Schaffn.) Maxon, comb. nov.—*Pteris Feei* Schaffn. ex Fée, Mém. Foug. 8: 73. 1857.

The present form, which was briefly described by Fée from material collected at Huatusco (*Schaffner 138, 141*) and on Popocatepetl (*Schaffner 186*), is represented in the U. S. National Herbarium by the following specimens:

MEXICO: Jalapa, Veracruz, *Pringle 8342*. Córdoba, Veracruz, *Finck 18; Kerber Exsicc. 79a*. Huatusco, Veracruz, *Mohr* in 1857. Guanajuato, *Dugés 6*. Alvarez, San Luis Potosí, *E. Palmer 67* in 1902. Teziutlán, Puebla, *Orcutt 4029*. Between Somoriel and Las Lajas, Hidalgo, *Rose 9204*. Below Ajusco, Mexico, *Rose & Painter 7214*.

GUATEMALA: Laguna de Ayarza, Dept. Jalapa, alt. 2,400 meters, *Heyde & Lux* (*J. D. Smith 4080*). Chichavac, Dept. Chimaltenango, alt. 2,400–2,700 meters, *Skutch 12*. Bananera, Dept. Chimaltenango, *J. R. Johnston 512; Mrs. B. B. Lewis 448*.

HONDURAS: Near Siguatepeque, Dept. Comayagua, alt. 1,050–1,400 meters, *Yuncker, Dawson & Youse 5600, 5781; Standley 56034*.

These agree essentially and are characterized, briefly, by their short, deltoid or broadly pentagonal blades, their extraordinarily copious, pilose-villous, hairy covering (much less pronounced upon the upper surface), their relatively broad and flat outer indusium, and the invariable presence of many long, slender cilia fringing the outer indusium.

Further studies may show this form to be specifically distinct. Its relationship is with the variable *P. aquilinum* var. *lanuginosum* (Bong.) Fernald (Rhodora 37: 247. 1935) of western North America, with which it appears to be connected through two or three transitional specimens from northern Mexico; but that so-called variety, remarkably varied as to shape of blade, has a much narrower outer indusium, which though hairy upon the surface is almost without exception wholly devoid of cilia. In this last respect var. *lanuginosum* differs widely from most European specimens of *P. aquilinum*, in which as a rule the outer indusium is conspicuously long-ciliate, the cilia often reaching nearly to the midrib of the segments (as in var. *Feei*); but even in Europe the cilia are sometimes altogether wanting, though rarely so, and in leaf shape, hairiness, and other characters European specimens show almost as great diversity as is exhibited by American material.

PTERIS L.

Pteris orizabae Mart. & Gal. In forest near the summit of the range above El Achote.

Pteris propinqua Agardh. In deep forest, Lancetilla Valley.

Pteris quadriaurita Retz. In a ravine above El Achote.

RHIPIDOPTERIS Schott

Rhipidopteris peltata (Sw.) Schott. On a tree in forest at the summit of the range above El Achote.

STENOCHLAENA J. Smith

Stenochlaena vestita (Fourn.) Underwood. Climbing on a tree in a wet ravine, El Achote.

STRUTHIOPTERIS Willd.

Struthiopteris polypodioides (Sw.) Trev. On a tree in dense forest near the summit of the range above El Achote.

Struthiopteris varians (Fourn.) Broadh. In a wet ravine near El Achote. Known previously only from Mexico.

TECTARIA Cav.

Tectaria dilacerata (Kunze) Maxon. In a wet ravine near El Achote; also in forest above Lancetilla Valley.

VITTARIA J. E. Sm.

Vittaria dimorpha K. Muell. On a tree in a wet ravine near El Achote.

Vittaria filifolia Fée. On a tree near the shore of Lake Yojoa.

MARSILIACEAE

MARSILEA L.

Marsilea sp. In water about 30 cm. deep in a marsh near Siguatepeque.

LYCOPODIACEAE

LYCOPODIUM L.

Lycopodium arcanum Maxon, sp. nov.—Pl. III. Sect. *Urostachys*. Planta epiphytica, ca. 20 cm. longa et lata; caulis ascendens, quinquies bipartitus, basi 2 mm. diametro, lignosus, angulatus; folia numerosa, 10- vel 12-faria, patentia, plerumque arcuata, acicularia, 10–17 mm. longa, basi 0.5–0.7 mm. lata, sursum angustiora, usque ad apicem subpungentem sensim attenuata, integra, longe decurrentia, sordide viridia, tenero-herbacea, siccitate per longitudinem carinata vel bisulcata latere abaxiali, latere adaxiali profunde concava vel subplicata, interdum ut videtur subtriquetra; sporangia pauca, in parte superiori zonis disposita (sporophyllis conformibus), rotundato-reniformia, 1.5 mm. lata, 1.2 mm. longa.

Plant epiphytic, 20 cm. long and broad, the stem 5 times divaricately bipartite, 2 mm. in diameter at base, about 1 mm. at apex, rigid, not flattened in drying; leaves crowded in attachment, borne in 10 or 12 ranks, acicular, spreading, mostly arcuate, 10–17 mm. long, 0.5–0.7 mm. broad at extreme base, 0.3–0.5 mm. broad below middle when plane, tapering to a subpungent apex, entire, delicately herbaceous, long-decurrent and sharply carinate upon the stem, on the abaxial side carinate throughout or often bisulcate by shrinkage of leaf tissue, on the adaxial side deeply concave or subplicate in drying, the leaf sometimes appearing subtriquetrous; plant sparingly fertile in the apical third, the sporangia borne in short, alternating zones, the sporophylls identical with foliar leaves; sporangia rounded-reniform, 1.5 mm. broad, 1.2 mm. long, with a deep sinus, protruding far beyond the sides of the sporophyll.

Type in the U. S. National Herbarium, No. 1,637,830, collected at summit of range above El Achote, above the plains of Siguatepeque, Department of Comayagua, Honduras, at 1,800 meters altitude, from the stem of a tree fern in rain forest, July 28, 1936, by T. G. Yuncker, R. F. Dawson, and H. R. Youse (No. 6149). No other material has been seen.

The present species is most nearly related to *L. stamineum* Maxon (Smiths. Misc. Coll. 56, No. 29:2. *pl. 2.* 1912) of Panama and Costa Rica, which it resembles habitally. But in *L. stamineum* the leaves are more numerous, invariably bright red at base, and of great delicacy, being truly capillary. In the present plant there is no trace of red.

Lycopodium cernuum L. In a subalpine bog near El Achote.

Lycopodium reflexum Lam. On a wet cliff, river bank.

Lycopodium Tuerckheimii Maxon. On a tree fern, in forest at the summit of the range above El Achote.

SELAGINELLACEAE

SELAGINELLA Beauv.

Selaginella cuspidata Link. On a dripping cliff, river bank in pine forest above Siguatepeque.

Selaginella cuspidata var. **elongata** Spring. Wet, shady river bank.

Selaginella guatemalensis Baker. In wet ravines at El Achote; also at the summit of the range in cloud zone.

Selaginella huehuetenangensis Hieron. On a cliff along river.

PINACEAE

PINUS L.

Pinus oocarpa Schiede. A tree 18 meters tall and 45 cm. in diameter or sometimes larger. Forming a belt of pine forest about the base of the mountains which rise from the edge of the plains of Siguatepeque.

Pinus pseudostrobus Lindl. A tree 12–15 meters tall and 60–75 cm. in diameter. In open pine forest above El Achote.

ALISMACEAE

ECHINODORUS L. Rich.

Echinodorus tenellus (HBK.) Buch. In a subalpine bog near El Achote.

GRAMINEAE

ANDROPOGON L.

Andropogon bicornis L. In shallow water, margin of a marsh.

Andropogon furcatus Muhl. In old, wet pasture.

Andropogon leucostachyus HBK. In wet pasture.

ARUNDINARIA Michx.

Arundinaria sp. Two species were collected, both of which were sterile. One had stems about 6 meters tall and 2.5 cm. in diameter. The other had stems 3.5 meters tall, light green mottled with darker green spots. In wet ravines at El Achote and El Rincón.

AXONOPUS Beauv.

Axonopus rhizomatosus Swallen. In old, wet pasture.

BAMBUSA Schreb.

Bambusa sp. Stems about 6 meters tall and 5 cm. in diameter, yellow. Large clump on river bank.

ELEUSINE Gaertn.

Eleusine indica (L.) Gaertn. River bank.

ERAGROSTIS Host

Eragrostis hirta Fourn. River bank, vicinity of Siguatepeque. "Very rare. New for Honduras" (Chase).

Eragrostis tephrosanthos Schult. On a wet bank.

ERIOCHRYSIS Beauv.

Eriochrysis cayennensis Beauv. In a subalpine bog near El Achote.

LASIACIS (Griseb.) Hitchc.

Lasiacis divaricata (L.) Hitchc. Scrambling over shrubs in a thicket, edge of forest near the summit of the range above El Achote.

Lasiacis procerrima (Hack.) Hitchc. Side of a wet ravine near El Achote.

LEERSIA Sw.

Leersia hexandra Sw. In a marshy pasture.

PANICUM L.

Panicum arenicoloides Ashe. On a rocky hillside.

Panicum laxum Sw. In old, marshy pasture.

Panicum maximum Jacq. Stems up to 1.2 meters tall. River bank.

Panicum sphaerocarpon Ell. On a rocky hillside.

PASPALUM L.

Paspalum notatum Flügge. In old pasture.

Paspalum plenum Chase. River bank.

Paspalum virgatum L. In a marsh near Tela.

PENNISETUM L. Rich.

Pennisetum setosum (Sw.) Rich. In wet ditch about 30 km. west of Tela.

PENTARRHAPHIS HBK.

Pentarrhaphis scabra HBK. Inflorescence and upper parts of the stems red. In old, wet pasture.

PHARUS L.

Pharus latifolius L. In the forest above Lancetilla.

ROTTBOELLIA L. f.

Rottboellia aurita Steud. var. **stigmosa** Hack. In a marsh.

SETARIA Beauv.

Setaria geniculata (Lam.) Beauv. In marshy pasture.

SORGHASTRUM Nash

Sorghastrum nutans (L.) Nash. Inflorescence reddish brown, attractive. In an old banana plantation.

SPOROBOLUS R. Br.

Sporobolus indicus (L.) R. Br. In old, wet pasture.

TRICHOLAENA Schrad.

Tricholaena rosea Nees. River bank.

TRIPSACUM L.

Tripsacum dactyloides L. In rich soil, river bank, 6 km. west of Siguatepeque.

UNIOLA L.

Uniola Pittieri Hack. In sand near the beach west of Tela.

CYPERACEAE

CAREX L.

Carex Humboldtiana Steud. Side of a wet ravine near El Achote. The species is new for the flora of Honduras.

Carex polystachya Sw. River bank.

CYPERUS L.

Cyperus cayennensis (Lam.) Britton. In a low, wet area on plains. The species is not reported from Honduras, although naturally to be expected there.

Cyperus haspan L. In old, wet pasture.

Cyperus incompletus (Jacq.) Link. River bank. Not recorded previously from Honduras.

Cyperus prolixus HBK. In a wet ravine near El Achote. A new species record for Honduras.

Cyperus surinamensis Rottb. In old, wet pasture.

Cyperus tenerrimus Presl. In pine-forest belt in wet soil.

Cyperus unioloides R. Br. In old, wet pasture. A species new for the Honduran flora.

ELEOCHARIS R. Br.

Eleocharis flaccida (Reichenb.) Urban. In a marsh.

Eleocharis geniculata (L.) R. & S. In a subalpine bog near El Achote.

Eleocharis mutata (L.) R. & S. In a marsh. New for the Honduran flora.

Eleocharis nodulosa (Roth) Schult. In a wet field.

Eleocharis sulcata (Roth) Nees. In a subalpine bog near El Achote.

FIMBRISTYLIS Vahl

Fimbristylis diphylla (Retz.) Vahl. In an old, wet field.

FUIRENA Rottb.

Fuirena simplex Vahl. In a subalpine bog near El Achote.

LIPOCARPHA R. Br.

Lipocarpha maculata (Michx.) Torr. In a subalpine bog near El Achote.

RYNCHOSPORA Vahl

Rynchospora barbata (L.) Kunth. Plants solitary or in small clumps, scattered on a rocky hillside.

Rynchospora cephalotes (L.) Vahl. Margin of a marsh, 12 km. east of Progreso.

Rynchospora corymbosa (L.) Britton. In old, wet pasture. The species is new for the flora of Honduras.

Rynchospora cyperoides (Sw.) Mart. In a marshy field. Not reported previously from Honduras.

Rynchospora dives Standl., sp. nov.—Perennis ca. 1 m. alta fere omnino glabra, rhizomate ut videtur brevi, culmis laevibus acute triquetris sat dense foliatis; folia longa ad 9 mm. lata, marginibus scabris; paniculae laxae elongatae, corymbis paucis axillaribus compositis usque 6 cm. latis laxe multifloris, spiculis oblongo-lanceolatis brunneo-stramineis ca. 5 mm. longis sessilibus vel breviter pedicellatis, ramis hispidulis, bracteis linearibus vel fere filiformibus, infimis longissimis, glumis oblongo-lanceolatis attenuatis glabris; setae 6 nucem subaequantes retrorse scabrae pallidae; nux ca. 1 mm. longa rotundato-ovalis pallide brunnescens lucida obscure longitrorsum costata minute reticulata, rostro cum tertia parte nucis aequilongo viridi conico.—Honduras: Side of ravine near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, 1,350 meters, July 15, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5900* (type in Herb. Field Mus.).

The relationship of the plant is with *R. locuples* Clarke, a species of Costa Rica, which has wider leaves and larger achenes with a relatively much longer beak.

Rynchospora polyphylla Vahl. Moist river bank about 5 km. northwest of Siguatepeque.

Rynchospora robusta (Kunth) Boeckl. In a subalpine bog near El Achote. An addition to the known flora of Honduras.

SCLERIA Berg

Scleria pterota Presl, var. **melaleuca** (Schlecht. & Cham.) Standl. On a ledge, river bank, about 5 km. northwest of Siguatepeque.

Scleria secans (L.) Urban. Scrambling over bushes in a thicket near Lake Yojoa. A common species of Central America, but not recorded heretofore from Honduras.

STENOPHYLLUS Raf.

Stenophyllus hirtellus (Schrad.) Standl. In an old, wet field. In Central America listed previously only for Guatemala.

PALMAE

CHAMAEDOREA Willd.

Chamaedorea geonomaeformis Wendl. Stems 1–1.5 meters tall and 2.5 cm. in diameter. Fruit becoming purplish black; rachis orange-red. In a wet ravine near El Achote.

Chamaedorea graminifolia Wendl. Stems up to 6 meters tall and 10–12 cm. in diameter. In forest near the summit of the range above El Achote.

Chamaedorea Lindeniana Wendl. Stems about 2 meters tall and 1–2 cm. in diameter. In a wet ravine near El Rincón.

ARACEAE

ANTHURIUM Schott

Anthurium basiattenuatum Standl., sp. nov.—Pl. IV. Epiphytica, caudiculo ut videtur brevi, internodiis brevissimis; petiolus 9–12 cm. longus gracilis supra canaliculatus, dorso obscure tricostatus geniculo ca. 1 cm. longo tumido instructus; lamina anguste oblongo-lanceolata ca. 29 cm. longa atque 8 cm. lata, apicem angustum versus longe sensim attenuata, basi acuta, crasse chartacea, opaca, supra in sicco cinereo-viridis, nervis non elevatis, subtus fere concolor, basi trinervia, costa crassa elevata, nervis lateralibus utroque latere ca. 12 angulo semirecto adscendentibus teneris prominentibus fere rectis 6–7 mm. a margine in nervum collectivum undulatum conjunctis, venis prominulis laxe reticulatis; pedunculi gracillimi petiolis paullo longiores; spatha late oblonga acutiuscula 2.5 cm. longa vel ultra ca. 1 cm. lata elevato-puncticulata; spadix sessilis 2 cm. longa vel paullo ultra 3 mm. crassus cylindricus; sepala

longitudine sua latiora.—Honduras: On fallen log in deep forest near the summit of the ridge above El Achote, in cloud zone, above the plains of Siguatepeque, Dept. Comayagua, 1,850 meters, August 1, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6268* (type in Herb. Field Mus.).

"Spadix deep maroon; spathe, peduncles, petioles, and midrib beneath pinkish."

Anthurium concinnatum Schott. On a rotten log near the shore of Lake Yojoa.

Anthurium lucens Standl., sp. nov.—Pl. V. Caudiculus ut videtur brevis crassus, internodiis brevissimis; petiolus ca. 40 cm. longus gracilis teretiusculus dorso grosse costatus; lamina chartacea sagittato-triangularis ca. 37 cm. longa atque basi 22 cm. lata, apicem acuminatum versus sensim angustata, basi late profunde (ca. 7 cm.) cordata, lobis posticis obtusis, supra in sicco sublucida, venulis prominulis, subtus fere concolor, basi 7-nervia, nervis infimis latere exteriore nervos 3 emittentibus, costa utroque latere nervos ca. 4 adscendentes remote a margine junctos emittente; pedunculus ca. 43 cm. longus gracilis teretiusculus; spatha reflexa lineari-lanceolato-oblonga 9.5 cm. longa 12 mm. lata apice angustissime filiformi-attenuata; spadix gracilis sessilis 12 cm. longus basi 4 mm. crassus. —Honduras: In wet ravine on bank of stream near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, 1,350 meters, July 13, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5844* (type in Herb. Field Mus.).

"Petioles and peduncles up to 1 meter long; spathe pale maroon; spadix deep red to maroon."

Anthurium pallens Schott. Spathe and spadix green. On a rotten log in a wet ravine near El Rincón; also in deep forest near the summit of the range above El Achote.

Anthurium parvispathum Hemsl.? Spadix maroon to brown; spathe green to light red; berries greenish red. On a log in forest near the summit of the range above El Achote.

Anthurium scandens (Aubl.) Engler. Spathe and spadix green; berries white. Bottom of a ravine near El Achote; also on a tree near the shore of Lake Yojoa.

Anthurium Yunckeri Standl., sp. nov.—Pl. VI. Caudiculus crassus ut videtur brevis, internodiis brevissimis, cataphyllis latis ca. 4 cm. longis mox decompositis fibrosis; petiolus gracilis ca. 26

cm. longus subteres, geniculo vix incrassato ca. 1.5 cm. longo; lamina triangulari-oblongo-cordata 23–25 cm. longa prope basin 9 cm. lata, e basi apicem versus sensim angustata, apice longe angustissime acuminata, basi anguste profunde (ad 5 cm.) cordata, lobis posticis apice rotundatis, supra in sicco opaca griseo-viridis, costa elevata, venis prominentibus, subtus brunnescens, basi 7-nervia, costa gracili elevata utroque latere nervos ca. 7 angulo angusto adscendentes fere rectos remote a margine in nervum collectivum fere regularem conjunctos emittente, nervo tenuiore inter pares primariorum parallelo interposito, venulis prominentibus reticulatis; pedunculus gracilis petiolum aequans teretiusculus; spatha oblongo-lanceolata 5.5 cm. longa 1 cm. lata apicem versus longissime anguste attenuata; spadix sessilis vix ultra 4 cm. longus 3 mm. crassus apicem versus paullo angustatus.—Honduras: Bottom of ravine near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, 1,350 meters, July 17, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5935* (type in Herb. Field Mus.).

"Spadix dark red; spathe and peduncle light red."

MONSTERA Adans.

Monstera pertusa (L.) de Vriese. On trees in a wet ravine near El Achote.

SPATHIPHYLLUM Schott

Spathiphyllum Friedrichsthalii Schott. Spathe green; spadix whitish. Stream bank in a ravine near Achote.

BROMELIACEAE

CATOPSIS Griseb.

Catopsis brevifolia Mez & Wercklé. On a tree near the shore of Lake Yojoa.

Catopsis nitida (Hook.) Griseb. On a tree in a wet ravine at El Achote.

Catopsis nutans (Sw.) Griseb. On a tree near bank of river.

Catopsis Oerstediana Mez. On a tree in forest at the summit of the range above El Achote.

Catopsis subulata L. B. Smith. On a tree, thicket on plain.

PITCAIRNIA L'Hér.

Pitcairnia sp. On ground near El Achote.

THECOPHYLLUM André

Thecophyllum montanum L. B. Smith, sp. nov.—Pl. VII. Acaule, 4 dm. altum; foliis dense crateriformi-rosulatis, 25 cm. longis, obscure punctulato-lepidotis, dorso lineis latis undulatis purpureis transverse pictis; vaginis ellipticis, 1 dm. longis; laminis ligulatis, acutis, 30–35 mm. latis, planis; scapo erecto, medio 5 mm. diametro, glabro; scapi vaginis erectis, quam internodia paulo longioribus, late ellipticis, breve triangulari-laminatis; inflorescentia pauciflora, subdensa, 5 cm. longa; bracteis primariis ex elliptico acuminatis, flores subaequantibus, nullo modo imbricatis, flores infimos 3 alteros 2 collaterales in axillis gerentibus; bracteis florigeris suborbicularibus, obtusis, 6–9 mm. longis, quam sepala bene brevioribus, late convexis, nullo modo carinatis, coriaceis, laevibus, obscure punctulatis; floribus subsessilibus; sepalis late ellipticis, obtusis, 12–15 mm. longis, coriaceis, extus glabris laevibusque; cet. ignotis.

HONDURAS: Comayagua: Epiphytic in virgin forest, summit of range above El Achote, above the plains of Siguatepeque, alt. 1,850 meters, 1936 *Yuncker, Dawson & Youse 6243* (Herb. Gray, type).

Thecophyllum montanum is most nearly related to *T. Werckleanum* of Costa Rica. Unlike the latter it has the leaf sheaths of the same color as the blades, the primary bracts small and remote, and the floral bracts little if any broader than long.

TILLANDSIA L.

Tillandsia Butzii Mez. Leaves mottled red and green. On a tree in a ravine near El Achote.

Tillandsia cyanea E. Morr. On a tree in forest near the summit of the range above El Achote.

Tillandsia excelsa Griseb. Leaves thin, green with purple spots above, purple beneath; inflorescence branching, reddish. On a tree in forest near El Rincón.

Tillandsia fasciculata Sw. Leaves greenish purple. Bracts and peduncle red. In forest near El Achote.

Tillandsia festucoides Brongn. On a tree near shore of Lake Yojoa.

Tillandsia glossophylla L. B. Smith, sp. nov.—Pl. VIII. Acaulis, 4 dm. alta; foliis dense cyathiformi-rosulatis, 2 dm. longis,

minutissime obscureque brunneo-lepidotis; vaginis ellipticis, amplis, 1 dm. longis; laminis ligulatis, acutis, 25 mm. latis, planis, viridibus vel purpureo-afflatis; scapo erecto, 5 mm. diametro; scapi bracteis erectis, dense imbricatis, late ovatis, apiculatis vel infimis acuminatis, glabris, nervatis; inflorescentia simplicissima, lineari-lanceolata, acuta, 18 cm. longa, 25 mm. lata, complanata; bracteis florigeris erectis, dense imbricatis, late ellipticis, obtusis, 3 cm. longis, sepala subaequantibus, ecarinatis, carneo-rubris, glabris, nervatis, subcoriaceis; floribus subsessilibus; sepalis anguste ellipticis, obtusis, subchartaceis, valde nervatis, glabris, liberis; petalis linearibus, laminis anguste ellipticis, 1 cm. longis; staminibus inclusis; stylo elongato; capsulis quam sepala paulo longioribus.

HONDURAS: Comayagua: In ravine near El Achote, above the plains of Siguatepeque, alt. 1,350 meters, 1936, *Yuncker, Dawson & Youse 5934* (Herb. Gray, type).

Tillandsia glossophylla appears to be more nearly related to *T. Walteri* Mez of Peru and Bolivia than to any North American species. *T. Walteri* differs in its triangular leaf blades and generally larger flower parts.

Tillandsia grandis Schlecht. In forest near El Achote.

Tillandsia juncea (R. & P.) LeConte. Peduncles and leaf tips blood-red. On a tree near bank of river.

Tillandsia lampropoda L. B. Smith, sp. nov.—Pl. IX. Acaulis, ad 43 cm. alta; foliis multis, substrictis, anguste cyathiformi-rosulatis, inflorescentiam subaequantibus; vaginis oblongo-ellipticis, 1 dm. longis, dense obscureque punctulatis, fulgide purpureis; laminis angustissime triangularibus, caudato-acuminatis, base 15–20 mm. latis, densissime adpresseque cinereo-lepidotis; scapo erecto, 6 mm. diametro, glabro; scapi bracteis erectis, imbricatis, late ovatis, apiculatis vel infimis anguste caudato-laminatis, perobscure punctulatis, laevibus, lucidis, vivo rubris; inflorescentia simplicissima, elliptica, acuta, valde complanata, 15 cm. longa, 7 cm. lata; bracteis florigeris distichis, dense imbricatis, quam internodia 8-plo longioribus, late ovatis, acutis, 5 cm. longis, 4 cm. latis, valde carinatis, coriaceis, laevibus, lucidis, perobscure punctulatis, ad apicem versus cinereo-lepidotis, apice citrinis, base rubris, anguste atro-marginatis; floribus solum imperfecte cognitis, subsessilibus; sepalis anguste lanceolatis, acutis, 32 mm. longis, carinatis, coriaceis, nervatis, glabris, liberis; petalis ca. 5 cm. longis; stylo elongato.

HONDURAS: Comayagua: On tree near El Achote, above the plains of Siguatepeque, alt. 1,350 meters, 1936, *Yuncker, Dawson & Youse 5895* (Herb. Gray, type).

It is not possible to see whether the stamens are exserted or not, but the style is much too long for the section *Phytarrhiza*. Consequently it must belong to either *Platystachys* or *Allardtia*, and I am inclined to feel that it is probably the latter. In habit *T. lampropoda* resembles the larger varieties of *T. fasciculata*, but the purple leaf sheaths and lustrous, mostly apiculate scape bracts readily distinguish it. Also in *T. fasciculata* the scales are uniform and completely cover the sheath and blade, while in *T. lampropoda* there is an abrupt transition from the inconspicuous, separated, punctiform scales of the sheath to the much larger, overlapping ones of the blade.

Tillandsia Leiboldiana Schlecht. Leaves green above, purplish beneath; inflorescence bright red. On a tree in ravine near El Achote. An exceptionally attractive species.

Tillandsia Makoyana Baker. On a tree near Siguatepeque.

Tillandsia multicaulis Steud. Leaves green, becoming purple toward the base; bracts yellow. On a tree in forest near El Achote.

Tillandsia polystachya L. Leaves green with faintly purple tips. On a tree in thicket near bank of river.

Tillandsia pruinosa Sw. On a tree near the shore of Lake Yojoa.

Tillandsia punctulata Cham. & Schlecht. Leaves green, becoming purplish at the base; inflorescence red. On a tree in forest at the summit of the range above El Achote.

Tillandsia recurvata L. Flowers white to lavender. On a tree in a thicket on plain.

Tillandsia Schiedeana Steud. Leaves reflexed; peduncles red. On a tree in forest near El Achote.

Tillandsia Standleyi L. B. Smith. Peduncles and bracts scarlet. A very attractive species. On a tree in forest near El Achote. Known only from this region.

Tillandsia usneoides L. Common on trees on the plains and hills; also about Lake Yojoa.

Tillandsia vestita Cham. & Schlecht. On a tree near the shore of Lake Yojoa.

Tillandsia Yunckeri L. B. Smith, sp. nov.—Pl. X. Acaulis, verisimiliter 5 dm. alta; foliis multis, crateriforme rosulatis, rectis, 4 dm. longis, valde purpureo-suffultis; vaginis late ellipticis, ca. 15 cm. longis, dense punctulato-lepidotis; laminis ligulatis, acutis, ad 5 cm. latis, planis, supra glabris, subtus obscure punctulato-lepidotis; scapo erecto, valido, glabro; scapi bracteis erectis, dense imbricatis, foliaceis, magnis; inflorescentia composita, anguste pyramidata, 2 dm. longa, ad apicem versus densa; bracteis primariis suborbicularibus, breve foliaceo-laminatis, spicas axillares superantibus amplexantibusque, vivo fulgide rubris, laevibus, glabris, lucidis; spicis sessilibus, late lanceolatis, acutis, dense 4-floris, basi bractea sterili praeditis, 65 mm. longis, 25 mm. latis, complanatis, supremis suberectis, infimis patentibus; bracteis florigeris ovato-lanceolatis, acutis, ad 45 mm. longis, sepala multo superantibus, acute carinatis et lateribus planis, coriaceis, laevibus vel obscure nervatis, glabris; floribus subsessilibus; sepalis lanceolatis, acuminatis, 3 cm. longis, coriaceis, glabris, acute carinatis, posterioribus alte connatis; petalis tubuloso-erectis, 5–6 cm. longis; staminibus verisimiliter exsertis.

HONDURAS: Comayagua: Epiphytic in forest at summit of range above El Achote, above the plains of Siguatepeque, alt. 1,800 meters, 1936, *Yuncker, Dawson & Youse 6432* (Herb. Gray, type); *6031* (Herb. Gray, cotype).

The material at hand does not show with certainty whether the stamens are exserted or included, but the probability is that *Tillandsia Yunckeri* belongs to the section *Platystachys*, where it is most closely related to *T. prodigiosa* Baker. It differs from this latter species in its much fewer-flowered spikes and very short-bladed primary bracts as well as in its ligulate, acute leaves.

COMMELINACEAE

CAMPELIA L. Rich.

Campelia Zanonia (L.) HBK. An herb, about 1.5 meters tall. Flowers pinkish violet; fruit violet. In sandy soil, bottom of a wet ravine near El Achote.

COMMELINA L.

Commelina coelestis Willd. An herb about 50 cm. tall. Flowers blue. In old, wet pasture.

TINANTIA Scheidw.

Tinantia erecta Schlecht. Stems very succulent, up to 1 meter tall and 1.5 cm. in diameter. Petals deep blue. River bank about 6 km. north of Siguatepeque.

TRADESCANTIA L.

Tradescantia elongata Mey. Petals violet to pink. In a wet ravine near El Achote.

PONTEDERIACEAE

EICHHORNIA Kunth

Eichhornia azurea (Sw.) Kunth. In a stream between Tela and Lancetilla Valley.

HETERANTHERA R. & P.

Heteranthera limosa (Sw.) Willd. Flowers pale lavender, delicate. In wet ditches.

Heteranthera reniformis R. & P. Corolla white. In a subalpine bog near El Achote.

LILIACEAE

SCHOENOCAULON Gray

Schoenocaulon officinale (Schl. & Cham.) Gray. An herb with white flowers. In moist soil, river bank.

SMILACINA Desf.

Smilacina paniculata Mart. & Gal. Flowers white; branches of the inflorescence and the berries reddish. In forest near the summit of the range above El Achote.

SMILACACEAE

SMILAX L.

Smilax subpubescens A. DC. A woody vine. In a thicket at the margin of forest near the summit of the range above El Achote.

Six additional species of *Smilax* were collected in sterile condition, of which four are believed by C. V. Morton to be new species though not describable in their sterile condition.

AMARYLLIDACEAE

BOMAREA Mirb.

Bomarea ovata (Cav.) Mirb. Sepals yellow flushed with pink; corolla greenish with maroon spots. Climbing in a thicket near river bank about 6 km. north of Siguatepeque.

CRINUM L.

Crinum cruentum Ker. In a low, marshy area between Tela and Lancetilla Valley.

IRIDACEAE

SISYRINCHIUM L.

Sisyrinchium alatum Hook. Flowers bright yellow. In wet soil.

MUSACEAE

HELICONIA L.

Heliconia librata Griggs. Plant about 3 meters tall; bracts golden yellow. In rich, moist forest near Lake Yojoa.

Heliconia pendula Wawra. An herb about 2 meters tall; peduncle and bracts bright red. Bottom of a wet ravine near El Achote; also near Tela River, Lancetilla Valley.

ZINGIBERACEAE

HEDYCHIUM Koenig

Hedychium coronarium Koenig. In moist soil between Tela and Lancetilla Valley.

RENEALMIA L. f.

Renealmia aromatica (Aubl.) Griseb. Stems about 1 meter tall; inflorescence scarlet. In a wet ravine near El Rincón.

MARANTACEAE

CALATHEA Meyer

Calathea verapax Donn. Sm. An herb about 1 meter tall; bracts scarlet. In a wet ravine near El Rincón.

ORCHIDACEAE

BRASSAVOLA R. Br.

Brassavola cucullata R. Br. On a tree in Lancetilla Valley.

CATASETUM L. Rich.

Catasetum maculatum Kunth. On a tree near the shore of Lake Yojoa.

COMPARETTIA Poepp. & Endl.

Comparettia falcata Poepp. & Endl. Flowers pink. On a tree near El Achote.

CRANICHIS Sw.

Cranichis pseudociliata Schltr. In humus in deep forest near the summit of the range above El Achote.

DICHAEA Lindl.

Dichaea muricata (Sw.) Lindl. On a tree near the shore of Lake Yojoa.

Dichaea trichocarpa Lindl. On a tree in a wet ravine near El Rincón.

EPIDENDRUM L.

Epidendrum Brassavolae Reichb. f. On a tree near the summit of the range above El Achote.

Epidendrum centropetalum Reichb. f. On a tree in cloud zone near the summit of the range above El Achote.

Epidendrum Chloe Reichb. f. On a tree near the summit of the range above El Achote.

Epidendrum cochleatum L. On a tree near the shore of Lake Yojoa.

Epidendrum cobanense Ames & Schltr. Flower parts fleshy, golden-yellow turning to brown. On a tree in wet ravine near El Achote.

Epidendrum difforme Jacq. On a tree near the shore of Lake Yojoa.

Epidendrum Lindleyanum (Batem.) Reichb. f. On a tree in a subalpine bog near El Achote.

Epidendrum luteoroseum A. Rich. & Gal. On a tree in pine-oak association near El Achote.

Epidendrum ochraceum Lindl. On a tree near the summit of the range above El Achote.

Epidendrum polyanthum Lindl. On a tree near the shore of Lake Yojoa.

Epidendrum polyanthum var. **myodes** (Reichb. f.) Ames, Hubb. & Schweinf. On a tree in a wet ravine at El Achote.

Epidendrum polybulbon Sw. On a tree in a ravine near El Achote.

Epidendrum pygmaeum Hook. On a tree in forest near the summit of the range above El Achote.

Epidendrum radicans Pav. ex Lindl. In a subalpine bog near El Achote.

Epidendrum ramosum Jacq. var. **mixtum** (Schltr.) Ames, Hubb. & Schweinf. On a pine tree in forest above El Achote.

Epidendrum rhynchophorum A. Rich. & Gal. On an oak tree in forest near El Achote.

Epidendrum teretifolium Sw. On a tree near El Achote.

Epidendrum Tuerckheimii Schltr. On an oak tree near El Achote.

Epidendrum virgatum Lindl. Rocky river bank.

ERYTHRODES Blume

Erythrodes Tuerckheimii (Schltr.) Ames. Terrestrial. In forest near the summit of the range above El Achote.

GONGORA Ruiz & Pav.

Gongora cassidea Reichb. f. On a tree in a ravine near El Achote.

GOVENIA Lindl.

Govenia Powellii Schltr. Flowers white. On river bank.

HABENARIA Willd.

Habenaria clypeata Lindl. *Lactiflora* form. On ground in pine forest near El Achote.

Habenaria crassicornis Lindl. On ground in a wet ravine near El Achote.

Habenaria novemfida Lindl. On ground in grass above El Achote.

Habenaria setifera Lindl. On ground in grass near El Achote.

IONOPSIS HBK.

Ionopsis utricularioides (Sw.) Lindl. On a tree near river.

ISOCHILUS R. Br.

Isochilus linearis R. Br. On a tree in a wet ravine near El Achote: also near the shore of Lake Yojoa.

LEPANTHES Sw.

Lepanthes acuminata Schltr. On a rotten log in forest in cloud zone near the summit of the range above El Achote. First report of this species from Honduras.

Lepanthes Dawsonii Ames, sp. nov.—Herba epiphytica, dense caespitosa. Caules secundarii gracillimi, plus minusve quinque-vaginati, apice unifoliati, vaginarum ostiis obscure hispidis. Folium elliptico-lanceolatum, breviter petiolatum. Inflorescentiae folio breviores. Flores succedanei. Sepala lateralia anguste lanceolata. Sepalum dorsale simile. Petala late reniformia. Labellum trilobatum, lobis lateralibus linearibus, lobo medio minute glanduloso.

Epiphytic herb, up to 4 cm. tall. Secondary stems erect or obliquely ascending, 2–2.5 cm. long, concealed by about six closely appressed, obscurely hispidulose sheaths which terminate in infundibuliform openings. Leaf 1–1.5 cm. long, about 6 mm. wide, elliptic-lanceolate with the apex minutely tridentate. Flowers few, opening in succession in abbreviated racemes. Lateral sepals 4 mm. long, about 1 mm. wide, united to about the middle, narrowly lanceolate, acuminate, acute, conspicuously 1-nerved through the middle. Dorsal sepal similar and about equal to the laterals in length. Petals reniform, 1 mm. in the longest dimension. Labellum 3-lobed; lateral lobes hardly 1 mm. long, linear, sharply incurved at the distal end; mid-lobe much shorter than the laterals, narrowly triangular, minutely and obscurely glandulose. Column dilated upward.

Lepanthes Dawsonii is an ally of *L. acuminata* Schltr. from which it differs in having smaller flowers in which the labellum has a pronounced mid-lobe. In dried specimens the sepals are orange-yellow, with an amethyst-purple labellum.

HONDURAS: Above the plains of Siguatepeque, on tree trunk in forest near the summit of the range above El Achote, in cloud zone, at 1,800 meters altitude, July 28, 1936. *T. G. Yuncker, R. F. Dawson & H. R. Youse 6152A* (type in Herb. Ames No. 43769).

Lepanthes Yunckeri Ames, sp. nov.—Herba epiphytica, dense caespitosa. Caules secundarii gracillimi, plus minusve quinque-vaginati, apice unifoliati, vaginarum ostiis hispidis. Folium ellipticum, marginatum, breviter petiolatum. Inflorescentiae singulae vel duae, folio breviores. Flores succedanei. Sepala lateralia ovato-lanceolata, acuminata, valde acuta. Petala rhomboidea. Labellum integrum, cordato-suborbiculare, leviter retusum. Columna generis.

Epiphytic herb, up to 4.5 cm. tall. Secondary stems 0.5–2 cm. long, concealed by about five closely appressed, hispid sheaths which terminate in infundibuliform openings. Leaf about 1 cm. long, up to 6 mm. wide, elliptic, marginate, coriaceous, with the apex minutely tridenticulate. Peduncles about 7 mm. long, shorter than the leaves, arising in the axil of a leaf, emerging singly or in pairs and bearing a several-flowered, abbreviated inflorescence, the flowers opening in succession. Sepals 4 mm. long, about 2.5 mm. wide with the dorsal sepal 3-nerved and the laterals 2-nerved. Petals rhomboidal, laterally prolonged into subcaudate tips, 3 mm. in the longest dimension. Labellum cordate-suborbicular, retuse in front, 2 mm. long, 2 mm. wide, 3-nerved. Column dilated upward.

Lepanthes Yunckeri resembles *L. eximia* Ames in the vegetative structures and in having the labellum simple rather than bilobed, but differs markedly in the outline of the petals and in the more abbreviated peduncles. From dried specimens the sepals appear to have been yellowish and the lip purplish with a tawny margin.

HONDURAS: Above Siguatepeque, on tree trunk in forest near the summit of the range above El Achote, in cloud zone, at 1,800 meters altitude, July 28, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6152* (type in Herb. Ames No. 46887).

LEPANTHOPSIS Ames

Lepanthopsis floripecten (Reichb. f.) Ames. Flowers light brown. On a tree in wet ravine near El Achote.

MALAXIS Sw.

Malaxis aurea Ames. Flowers greenish. On ground, stream bank.

Malaxis Maxonii Ames. Flowers greenish. On a rotten log in forest near the summit of the range above El Achote.

Malaxis Parthonii Morr. On ground in a wet ravine near El Achote.

MAXILLARIA R. & P.

Maxillaria uncata Batem. On a tree above Lancetilla Valley.

Maxillaria variabilis Batem. On a tree near the shore of Lake Yojoa.

NOTYLIA Lindl.

Notylia trisepala Lindl. & Paxt. On a tree, hills above Lancetilla Valley.

ONCIDIUM Sw.

Oncidium carthaginense Sw. On a tree, plains near Siguatepeque.

Oncidium graminifolium Lindl. On rocks in a ravine near El Achote.

Oncidium leucochilum Batem. On a tree, rocky river bank.

PELEXIA Poit.

Pelexia hondurensis Ames. On ground in a wet ravine near El Achote.

PLEUROTHALLIS R. Br.

Pleurothallis Carioi Schltr. On a tree, bank of river.

Pleurothallis fuegii Reichb. f. On a tree near the summit of the range above El Achote. Very rare.

Pleurothallis hirsuta Ames. On a fallen tree trunk near El Achote.

Pleurothallis Johnsonii Ames. On a rocky cliff near El Achote.

Pleurothallis pansamalae Schltr. On a tree, summit forest above El Achote.

POLYSTACHYA Hook.

Polystachya luteola Hook. On a rotten log, hills above Lancetilla Valley.

Polystachya minor Fawc. & Rendl. Flowers fleshy, rich yellow. On trees in a wet ravine near El Achote.

RESTREPIA HBK.

Restrepia xanthophthalma Reichb. f. On tree near El Achote.

SARCOGLOTTIS Presl

Sarcoglottis picta Klotzsch. Flowers greenish white. In wet soil under trees.

SCHOMBURGKIA Lindl.

Schomburgkia tibicinis Batem. On coconut palms near San Juan Carib village, west of Tela.

SOBRALIA Ruiz & Pav.

Sobralia macrantha Lindl. On ground in a wet ravine near El Achote.

STANHOPEA Hook.

Stanhopea ecornuta Lem. Flowers large, white. On a tree near the shore of Lake Yojoa.

STELIS Sw.

Stelis hymenantha Schltr. On a tree near the summit of the range above El Achote.

Stelis thecoglossa Reichb. f. On a tree near the summit of the range above El Achote.

VANILLA Sw.

Vanilla pompona Schiede. Fruit triangular in section, up to 15 cm. in length. Climbing in a thicket, river bank.

PIPERACEAE

PEPEROMIA Ruiz & Pavón

Peperomia aggravescens Trelease, sp. nov.—Herba late prostrata et radicans stolonifera, caulibus modice brevibus adsurgentibus rubris foliatis sparse minute hispidulis ad glabrescentibus vix 2 mm. crassis; folia alterna, caulium sterilium orbicularia et 1 cm. lata, alia subrhombeo-elliptica et plus minusve obtuso-acuminata vel lanceolata atque acuta, basi acuta, 2–2.5 cm. longa, 1–1.5 cm. lata, 1- vel obscure 3–5-nervia, subtus pallidiora, in sicco subcoriacea opaca; petiolus 3–5 mm. longus amplexicauli-decurrens; spicae terminales 50–60 mm. longae 1 mm. crassae, pedunculo gracili 10 mm. longo; bracteae rotundo-peltatae, ovario suboblique apiculato, stigmate subapicali.

HONDURAS: On rotting wood, cloud zone above El Achote, near Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 5990* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.), also *No. 6188* from the same locality.

Peperomia amnicola Trelease, sp. nov.—Herba majuscula repenti-adsurgens epiphytica glabra, caule 3 mm. crasso; folia alterna elliptico-oblanceolata vel subobovata subobtuso-acuminata, basi cuneata, 4–7 cm. longa 2–3 cm. lata, 5–7-nervia, nervis basin versus confluentibus, in sicco firma, subtus pallidiora, petiolo circiter 5 mm. longo; spicae apicales, immaturae tantum visae.

HONDURAS: On a tree, river bank near Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5799* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Peperomia argumentosa Trelease, sp. nov.—Herba parvula rhizomatosa glabra, caule vix 2 mm. crasso; folia alterna elliptica vel elliptico-subobovata abrupte breviter acuminata 3–5 cm. longa 2–3 cm. lata 3–5-nervia, in sicco coriacea, subtus flavescentia, petiolo gracili ca. 10 mm. longo; spicae terminales et ex axillis superioribus nascentes vix 60–70 mm. longae et 2 mm. crassae, pedunculo 10–15 mm. longo; bracteae rotundo-peltatae; baccae rotundato-ovoideae subapiculatae, stigmate obliquo.

HONDURAS: On a log in ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 5966* (type in herb. Univ. Illinois).

Peperomia caducipilosa Trelease, sp. nov.—Frutex radicantipendula arboricola evanescente subconspicue molliter pilosa, caule 2–3 mm. crasso; folia lanceolato-elliptica vel ovato-elliptica acute acuminata, basi subacuta vel latiora basi obtusa, versus basin pinnatinervia, 4–11 cm. longa 2–4.5 cm. lata, petiolo 1.5–2.5 cm. longo subpersistente pubescente; spicae terminales breves solitariae, pedunculo aequilongo medio bracteato, bracteis rotundo-peltatis.

HONDURAS: Lancetilla Valley, alt. 30 meters, *Yuncker 4544* (type in herb. Univ. Illinois).

Peperomia chucanebana Trelease. On tree near Lake Yojoa, at 630 meters.

Peperomia circulifolia Trelease, sp. nov.—Herba parvula plus minusve repens caespitosa arboricola, caule 1–2 mm. crasso primo velutino; folia saepe 5–6-verticillata elliptico-obovata emarginulata, basi acuta, ca. 10 mm. longa atque 5 mm. lata, vix plus quam 1-nervia, margine ciliata, ciliis rectis, subtus tantum transiente flavescentia, subtus hispidula, supra minus dense hispidula, petiolo ca. 2 mm. longo hispidulo; spicae terminales 20 mm. longae 1 mm. crassae, pedunculo gracili 10 mm. longo sparse minute hispidulo; bracteae rotundo-peltatae.

HONDURAS: In a wet ravine on a tree trunk near El Achote, above Siguatepeque, Department of Comayagua, at 1,350 meters, *Yuncker, Dawson & Youse 6361* (type in herb. Univ. Illinois).

Peperomia circulifolia var. **flava** Trelease, var. nov.—Folia magis obovata ca. 10 mm. longa et 8 mm. lata subtus subpersistente opaco-flavescentia; planta terrestris.

HONDURAS: In the same region as the typical form of the species, at 1,350 meters, *Yuncker, Dawson & Youse 5869* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Peperomia circulifolia var. **eciliata** Trelease, var. nov.—Var. *flavae* valde similis, foliis 3-nerviis tenuioribus minus flavescentibus non radiato-ciliatis.

HONDURAS: Region of the typical form of the species at 1,350 meters, *Yuncker, Dawson & Youse 6360* (type in herb. Univ. Illinois).

Peperomia collocata Trelease, sp. nov.—Herba parvula rhizomatoso-adsurgens glabra, caule 1 mm. crasso; folia alterna elliptico-subspathulata plerumque obtusa, basi subcuneata, 3.5–7 cm. longa 1.5–3 cm. lata, ca. 5-nervia, nervis 10–15 mm. longe confluentibus, in sicco subfirma, subtus pallidiora, petiolo gracili 5 mm. longo; spicae terminales et ex axillis superioribus nascentes 70 mm. longae 1 mm. crassae, pedunculo gracili fere 25 mm. longo; bracteae rotundo-peltatae; ovarium oblique apicatum, stigmate subapicali.

HONDURAS: On a log in a ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6106* (type in herb. Univ. Illinois).

Peperomia condormiens Trelease, sp. nov.—Herba modice alta sed delicata subsimplex glabra, caule gracillimo; folia alterna orbiculari-ovata emarginata basi rotundata vel ad petiolum abrupte angustata, 1.5–2.5 cm. longa et aequilata, 5–7-nervia, nervis superioribus in foliis longioribus e basi distincte separatis, supra intense viridia, subtus pallidiora, petiolo gracili vix 10 mm. longo; spicae terminales 70 mm. longae 1 mm. crassae, pedunculo 25 mm. longo; bracteae rotundo-peltatae; ovarium ovoideum, stigmate apicali stylum brevem terminante.

HONDURAS: Summit in forest above El Achote, above Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 6237* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Peperomia conocarpa Trelease, sp. nov.—Herba modice parva glabra rhizomatosa, ramis fertilibus erectis simplicibus, caule vix 2 mm. crasso sulcato; folia 3–4-verticillata elliptico-obovata emarginata, basi cuneata, 6–12 mm. longa 4–8 mm. lata, in sicco viridia subtenuia sed opaca, vix plus quam 1-nervia, petiolo 1–2 mm. longo; spicae terminales subfiliformes 15–25 mm. longae, pedunculo filiformi aequilongo; bracteae rotundo-peltatae; baccae late conicae pseudocupula basali stipatae, stigmate apicali stylum brevem terminante.

HONDURAS: On a tree trunk in forest, cloud zone above El Achote, near Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 6189* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.); also *No. 6010.*

Peperomia Dawsoni Trelease, sp. nov.—Herba subparva longirepens lignicola, caule 2 mm. crasso plus minusve minute hispidulo; folia alterna orbicularia vel rotundo-ovata, rare sublanceolata, apice rotundata vel obtuse breviter acuminata aliquanto emarginulata, 1–1.5 cm. longa et aequilata, obscure trinervia, coriacea, subtus flavescentia, petiolo filiformi 2–7 mm. longo sparse minute hispidulo; spicae terminales 25 mm. longae 1 mm. crassae, pedunculo vix 5 mm. longo, bracteis rotundo-peltatis; ovarii apex obliquus, stigmate subapicali.

HONDURAS: On a rotten log in forest, cloud zone above El Achote, near Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 6009* (type in herb. Univ. Illinois).

Peperomia defluens Trelease, sp. nov.—Herba majuscula radicanti-pendula glabra, caule 2 mm. crasso; folia subelliptica vel ovata acuminata, basi obtusa, 11 cm. longa 3–5 cm. lata, basin versus pinnatinervia, petiolo 1 vel in foliis inferioribus 4 cm. longo; spicae terminales statu fructifero 80–100 mm. longae 4 mm. crassae, pedunculo 20–30 mm. longo prope medium bracteato; baccae anguste oblongae oblique acuto-scutulatae, stigmate in scutulo centrali.

HONDURAS: In forest, Lancetilla Valley, 27 meters, *Yuncker 4916* (type in herb. Univ. Illinois); also at 30 meters, *Yuncker 4630.*

Peperomia eripipunctulata Trelease, sp. nov.—Herba subparva stolonifero-adsurgens glabra non nigro-punctulata, faciem *P. rubefactae* simulans, caule 2 mm. crasso; folia alterna lanceolata vel elliptica subobtuso-acutata, basi acuta, 2.5–5 cm. longa 1–2 cm. lata, 3-nervia vel minus conspicue 5-nervia, nervis interioribus inferne confluentibus, in sicco subcoriacea, subtus pallidiora, petiolo vix 10 mm. longo; spicae terminales vix 40 mm. longae et 2 mm. crassae, pedunculo 5 mm. longo.

HONDURAS: On a rotten log in ravine near El Rincón, about 10 miles west of Siguatepeque, Department of Comayagua, 1,400–1,500 meters, *Yuncker, Dawson & Youse 6079* (type in herb. Univ. Illinois); in a ravine near El Achote, above Siguatepeque, 1,350 meters, *No. 6104.*

Peperomia filici-decorans Trelease, sp. nov.—Herba subparva repenti-adsurgens arboricola, caule 2 mm. crasso transiente

minute crispo-puberulo; folia ternata vel quaternata lanceolata obtuse protracto-acuminata, basi acuta, vix 2.5–3 cm. longa atque 1–2 cm. lata, 3-nervia, sparse crispo-puberula vel glabrescentia, firma, subtus pallidiora, petiolo 3–4 mm. longo; spicae terminales 20 mm. longae 1 mm. crassae, pseudo-pedicellis sparsis, pedunculo gracili 15–20 mm. longo, bracteis rotundo-peltatis.

HONDURAS: On the trunk of tree fern, ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6105* (type in herb. Univ. Illinois).

Peperomia flagitans Trelease, sp. nov.—Herba subparva simplex sed plus minusve caespitosa glabra, caulibus vix 2 mm. crassis; folia alterna elliptico-subobovata apice obtusa et emarginulata, basi cuneata, 2.5–3.5 cm. longa 1.5–2 cm. lata, 5-nervia, in sicco coracea atque opaca, petiolo 5 mm. longo amplexicauli decurrente; spicae terminales 60 mm. longae 2 mm. crassae, pedunculo 10–20 mm. longo.

HONDURAS: River bank 6 km. west of Siguatepeque, Department of Comayagua, 1,200 meters, *Yuncker, Dawson & Youse 6383* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Peperomia inaudax Trelease, sp. nov.—Herba modice parva simplex erecta glabra, caule vix 2 mm. crasso; folia alterna elliptica vel inferiora subobovata emarginulata, basi acuta, 2.5–3.5 cm. longa 1.5–2 cm. lata 1-nervia vel obscure 3-nervia, subtus pallidiora, petiolo 5 mm. longo amplexicauli-decurrente; spicae terminales 50 mm. longae 2 mm. crassae, pedunculo 20 mm. longo, bracteis rotundo-peltatae; baccae 1.5 mm. longae ovoideo-cylindraceae, pedicellis in maturitate gracilibus aequilongis, stigmate in apice scutelli oblique concavi inserto.

HONDURAS: On a log in forest, cloud zone above El Achote, near Siguatepeque, Department of Comayagua, 1,850 meters, *Yuncker, Dawson & Youse 6242* (type in herb. Univ. Illinois).

Peperomia lancetillana Trelease, sp. nov.—Herba modice alta diffusa et radicans glabra, caule ca. 3 mm. crasso; folia alterna obovata et obtusa vel subrhombica et subulato-apicata, basi cuneata, 5–9 cm. longa 2.5–3.5 cm. lata pinnatinervia, in sicco coriacea, petiolo 1–2 vel 3.5 cm. longo; spicae terminales et sympodiales 70–120 mm. longae 1–2 mm. crassae, pedicellis 2–3 cm. longis in apice pedunculi 1-bracteati duplo longioris geminatis, bracteis minutis rotundo-peltatis; baccae ellipsoideae rostratae, stigmate ad basin rostri anteriore.

HONDURAS: Lancetilla Valley, near Tela, 60 meters, *Yuncker 4943* (type in herb. Univ. Illinois); at 30 meters, *Yuncker 4629;* at 75 meters, *Yuncker 5084.*

Peperomia lancetillana var. **spathifolia** Trelease, var. nov. —Caulis brevissimus, internodiis brevibus; folia elliptico-spathulata vel obovato-spathulata obtusa basi longe cuneata 7–10 cm. longa 2.5–4.5 cm. lata; spica solitaria 50–75 mm. longa 2 mm. crassa, pedunculo longiore.

HONDURAS: Lancetilla Valley, 60 meters, *Yuncker 5040* (type in herb. Univ. Illinois).

Peperomia laudabilis Trelease, sp. nov.—Herba subparva simplex stolonifera, foliis decidue puberulo-ciliatis exceptis glabra, caule 1 mm. crasso; folia alterna elliptico-oblanceolata vel subobovata apice rotundata vel subtruncata, basi subcuneata, 1.5–4.5 cm. longa 1–1.5 cm. lata, 2–4-nervia, in sicco viridia tenuia, petiolo 5 mm. longo; spicae terminales et axillares 50 mm. longae 1 mm. crassae, pedunculo filiformi 20 mm. longo et ultra, bracteis rotundo-peltatis; baccae ovoideae apice obliquae, stigmate subapicali.

HONDURAS: On a tree base, El Achote, near Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6298* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Peperomia longiacuminata Trelease. On a log in forest, Lancetilla Valley, at 30 meters.

Peperomia mala Trelease. sp. nov.—Herba subparva rhizomatosa adsurgens glabra, caule 2–3 mm. crasso 4-lineato; folia alterna elliptica subacuta, basi acuta, 20–55 mm. longa 10–23 mm. lata obscurissime 3–5-nervia, coriacea, subtus pallidiora, petiolo 5–10 mm. longo amplexicauli-decurrente; inflorescentia?

HONDURAS: On a tree trunk, river bank, Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5737* (type in herb. Univ. Illinois).

Peperomia mollipubis Trelease, sp. nov.—Herba modice alta adsurgens ubique gracili-pilosa, caule 1–3 mm. crasso; folia alterna subrhombice elliptica vel obovata obtusa interdum obscure emarginulata, basi acuta, 3.5–4 cm. longa 1.5–2.5 cm. lata 5-nervia, subtus pallidiora, in sicco tenuia sed opaca, petiolo gracili 20–30 mm. longo; spicae terminales et ex axillis superioribus nascentes in statu juvenili 25 mm. longae 2 mm. crassae, pedunculo brevi crasso, bracteis rotundo-peltatis margine hispidis.

HONDURAS: In a ravine at El Achote, near Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6367* (type in herb. Univ. Illinois).

Peperomia montis-verticis Trelease, sp. nov.—Herba modice alta adsurgens glabra, caule 2 mm. versus basin crasso; folia alterna subelliptica obtuse breviter acuminata basi acuta, 4–7 cm. longa 2–3 cm. lata 5-nervia, in sicco subcoriacea, petiolo gracili circiter 10 mm. longo amplexicauli-decurrente; spicae 60 mm. longae 2 mm. crasse apiculatae, pedunculo 5 mm. longo, bracteis rotundo-peltatis.

HONDURAS: Cloud zone near summit of the range above El Achote, near Siguatepeque, Department of Comayagua, 1,850 meter, *Yuncker, Dawson & Youse 6244* (type in herb. Univ. Illinois).

Peperomia nebuligaudens Trelease, sp. nov.—Herba parva stolonifero-adsurgens glabra, caule 2–3 mm. crasso, internodiis brevibus; folia alterna elliptica vel subobovata, majora subacuta, basi acuta, 2–6 cm. longa 1–3 cm. lata 3-nervia, subtus pallidiora, in sicco coriacea et opaca, petiolo 5–10 mm. longo amplexicauli-decurrente; spicae terminales in statu juvenili 30 mm. longae 2–3 mm. crassae, pedunculo 10 mm. longo, bracteis rotundo-peltatis; baccae sunglobosae, stigmate in apice obliquo subapicali.

HONDURAS: Cloud region above El Achote, near Siguatepeque, Department of Comayagua, 1,850 meters, *Yuncker, Dawson & Youse 6186* (type in herb. Univ. Illinois).

Peperomia novae-hispaniae Trelease. Near Paral, shore of Lake Yojoa, Department of Cortés, at 630 meters.

Peperomia novella Trelease, sp. nov.—Herba modice alta lignicola adsurgens, superne foliata et ramosa, caule 3 mm. basin versus crasso subpersistente puberulo; folia vulgo ternata vel quaternata subspathulata obtusa vel subtruncata, basi cuneata, 10–25 mm. longa 4–10 mm. lata, in sicco firma, subtus flavescentia, vix plus quam 1-nervia, supra ad costam puberula, subtus sparse puberula, petiolo 2–3 mm. longo puberulo; spicae immaturae, terminales, bracteis rotundo-peltatis.

HONDURAS: On a rotten log in forest, cloud zone above El Achote, near Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 6139* (type in herb. Univ. Illinois).

Peperomia opaca Trelease, var. **ciliata** Trelease, var. nov.—Herba modice alta rhizomatosa caespitosa faciem *P. reflexae* simulans, caule primo rigido-pubescente, foliis plus minusve rigido-

ciliatis; spicae in statu juvenili 20 mm. longae 2 mm. crassae, pedunculo 10–12 mm. longo rigido-pubescente, rhachide pubescente; baccae subcylindraceae, pseudocupula basali, apice acutatae, stigmate apicali.

HONDURAS: Cloud zone above El Achote, near Siguatepeque, Department of Comayagua, 1,850 meters, *Yuncker, Dawson & Youse 6187* (type in herb. Univ. Illinois); also at 1,800 meters, *No. 6008;* at 1,500 meters, *No. 6078*; and at 1,350 meters, *No. 6366*.

Peperomia perplexa Trelease. On tree near Lake Yojoa, Department of Cortés, at 630 meters.

Peperomia petenensis Trelease, var. **hondurensis** Trelease, var. nov.—Folia 7 cm. longa, 4 cm. lata et acuta, vel 12 cm. longa, 7 cm. lata et profunde emarginata; spicae juveniles 90 mm. longae 3 mm. crassae, in statu adulto ad 290 mm. longae.

HONDURAS: El Achote, near Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 5922* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Peperomia praeteruentifolia Trelease, sp. nov.—Herba modice alta adsurgens, caule basin versus 3 mm. crasso transiente puberulo, superne ramoso; folia alterna, longiora rhombico-ovata, basi et apice longe acuta, 2.5–6 cm. longa 1.5–4 cm. lata, 3-nervia vel propter costam obscure ramosam obscure 5-nervia, in sicco membranacea, plus minusve persistente sed sparse adpresso-pilosa, petiolo filiformi puberulo ad 1–3 cm. longo; spicae axillares in statu juvenili 30 mm. longae 1 mm. crassae, pedunculo filiformi puberulo 5 mm. longo, bracteis rotundo-peltatis.

HONDURAS: River bank near Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5614* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Peperomia rhodophlebia Trelease, sp. nov.—Herba modice alta epiphytica glabra, caule 3–4 mm. crasso in sicco valde angulato; folia opposita vel ternata rhombice lanceolato-elliptica acuminata, basi cuneata, 25–40 mm. longa 15–18 mm. lata, in vivo rubro-venosa, in sicco crassa dura opaca, petiolo 5 mm. longo; inflorescentia?

HONDURAS: On a tree near Potrerillos, Department of Cortés, *Yuncker 4896* (type in herb. Univ. Illinois).

Peperomia rinconensis Trelease, sp. nov.—Herba stolonifera, ramis breviusculis foliosis minute puberulis circiter 1 mm. crassis; folia alterna subrhombeo-lanceolata, obtuse protracto-acuminata,

basi acuta, 3.5 cm. longa 1.5 cm. lata 1-nervia vel obscure 3–5-nervia, in sicco opaca subtus pallidiora, petiolo 2–4 mm. longo amplexicauli-decurrente aliquanto sparse minute pŭberulo; spicae terminales 40–50 mm. longae 1 mm. crassae, pedunculo vix 10 mm. longo, bracteis rotundo-peltatis; ovarium apice obliquum, stigmate subapicali.

HONDURAS: On a rotten log in a wet ravine near El Rincón, west of Siguatepeque, Department of Comayagua, 1,400–1,500 meters, *Yuncker, Dawson & Youse 6080* (type in herb. Univ. Illinois).

Peperomia rotundifolia (L.) HBK. On stones and trees in forest above Lancetilla Valley, 60–90 meters.

Peperomia rubefacta Trelease, sp. nov.—Herba modice alta rhizomatosa nigro-punctulata, caule 1–2 mm. crasso glabro vel superne pilis paucis sparsis onusto; folia primo crassa, lucida vel supra pilis paucis conspersa, lanceolata acuminata, basi acuta, 4–6 cm. longa 1.5–2 cm. lata, 5-nervia nervis interioribus basi aliquanto confluentibus, in sicco opaca subcoriacea, petiolo 5–10 mm. longo amplexicauli-decurrente plus minusve canaliculato, marginibus aliquanto ciliatis; spicae 100 mm. longae 2 mm. crassae, pedunculo gracili 10 mm. longo, bracteis rotundo-peltatis; baccae ovoideae apice obliquae et plus minusve rostratae, stigmate subapicali.

HONDURAS: El Rincón, west of Siguatepeque, Department of Comayagua, 1,400–1,500 meters, *Yuncker, Dawson & Youse 6081* (type in herb. Univ. Illinois).

Peperomia suavis Trelease, var. **hondurensis** Trelease, var. nov.—Characteribus speciei, odorem *Zingiberis* exhalans; folia elliptico-ovata breviter acuminata, basi rotundata vel peltata, 16–19 cm. longa 10–13 cm. lata, ubique obscure nervosa, petiolo 9–12 cm. longo; spicae 220 mm. longae 3–4 mm. crassae pedunculum bibracteatum ca. 7 cm. longum solitarie terminantes; baccae rotundato-ovoideae glandulosae rostratae.

HONDURAS: Ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 5878* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Peperomia subgeminispica Trelease, sp. nov.—Herba majuscula diffusa radicans glabra rupicola, caule 3–4 mm. crasso; folia alterna oblanceolato-obovata subobtuse acuminata, basi cuneata, 8.5–13 cm. longa 3.5–5.5 cm. lata, e tertio vel medio inferiore pinnatinervia, petiolo 2–3 cm. longo; spicae terminales apice pedunculi brevis geminatae 128 mm. longae 2 mm. crassae, pedunculo 1–2.5

mm. longo, bracteis rotundo-peltatis parvis; stigma prope basin scutelli longiacuminati insertum.

HONDURAS: On a rock, hills above Lancetilla Valley, at 90 meters, *Yuncker 4987* (type in herb. Univ. Illinois).

Peperomia tressis Trelease, sp. nov.—Herba modice alta repens glabra, caule 2 mm. crasso; folia alterna late elliptica ad rotundo-obovata vel subrhombeo-obovata, apice rotundata vel obtuse subacuminata, basi acuta, 2–4 cm. longa 2–2.5 cm. lata, 3-nervia vel obscure 5-nervia, subtus paullo pallidiora, in sicco chartacea, petiolo ca. 10 mm. longo; spicae ex axillis superioribus nascentes 35 mm. longae 2 mm. crassae, pedunculo ca. 5 mm. longo.

HONDURAS: In a ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6001* (type in herb. Univ. Illinois).

Peperomia Trumani Trelease, sp. nov.—Planta parva epiphytica rhizomatosa, caule filiformi, internodiis brevibus puberulis; folia inferiora rotundata vel elliptica, superiora lanceolata atque basi et apice acuta, 8 mm. longa et aequilata vel superiora 15–20 mm. longa atque 5 mm. lata, 1-nervia vel obscure 3-nervia, puberula vel glabrescentia, subtus pallida, petiolo vix 5 mm. longo; spicae terminales vix 10 mm. longae et 1 mm. crassae, pedunculo 1 mm. longo.

HONDURAS: On a rotten tree trunk near Lake Yojoa, Department of Cortés, 630 meters, *Truman G. Yuncker 4847* (type in herb. Univ. Illinois).

Peperomia yojoana Trelease, sp. nov.—Herba modice parva repens radicans glabra, caule 1–2 mm. crasso; folia alterna lanceolata ad subrhombeo-oblanceolata, apice attenuato subobtuso, basi acuta vel cuneata, 1–3.5 cm. longa 0.5–1.25 cm. lata, 1-nervia vel plus minusve obvie 3–5-nervia, coriacea et opaca, subtus flavescentia et concolore vel obscure granulosa, petiolo vix 5 mm. longo amplexicauli-decurrente; spicae vix 60–70 mm. longae et 1 mm. crassae laxiflorae, pedunculo fere 2 cm. longo, bracteis rotundo-peltatis; baccae subglobosae, stigmate in apice obliquo aliquanto acutato subapicali.

HONDURAS: Lake Yojoa, Department of Cortés, 630 meters, *Yuncker 4913* (type in herb. Univ. Illinois), *4823*, *4902*.

Peperomia Yousei Trelease, sp. nov.—Herba majuscula stolonifero-adsurgens fragrans glabra, caule 4–5 mm. crasso; folia alterna elliptica vel obovata obtusa vel fere truncato-emarginulata,

basi cuneata, 5–7.5 cm. longa 4–5 cm. lata graciliter pinnatinervia, in sicco coriacea, petiolo 2–3.5 cm. longo; spicae pedunculos 1–2 graciles axillares 1-bracteatos 4–5 cm. longos terminantes, initio anthesis 115 mm. longae et 2 mm. crassae, pedicellis ca. 2 cm. longis sparse minute puberulis, bracteis magnis granulosis paucis pseudo-verticillum efformantibus; baccae subcylindraceae, scutello obliquo attenuato-acuminato, stigmate subapicali.

HONDURAS: In a wet ravine near El Achote, above Siguatepeque, Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 5995* (type in herb. Univ. Illinois), *6134*. Duplicate of the latter number in Herb. Field Mus.

Peperomia Yunckeri Trelease, sp. nov.—Herba modice alta sed delicata aliquanto laxe ramosa, pagina superiore folii obscure viridi excepta plus minusve rubescens, caule 1 mm. vel basin versus ad 3 mm. crasso persistente minute puberulo; folia alterna ovata vel ovali-ovata basi et apice acuta 1.5–2.5 cm. longa 1–1.5 cm. lata multiplinervia, nervis basalibus 2-jugatis, addito prope medium costae ramo alio, subtus albescentia, vulgo plicata, utrinque minute puberula vel glabrescentia, petiolo gracili ca. 10–15 mm. longo puberulo; spicae terminales et ex axillis superioribus nascentes filiformes 60–100 mm. longae laxiflorae, pedunculo ca. 5–15 mm. longo sparse puberulo; bracteae rotundo-peltatae; baccae rubrae ellipsoideae, apice conico-obliquo, stigmate subapicali.

HONDURAS: Wet soil along bank of a stream northwest of Siguatepeque, Department of Comayagua, 1,100 meters, *Yuncker, Dawson & Youse 6392* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

PIPER L.

Piper actae Trelease, sp. nov.—Frutex 2–3-metralis nervis folii subtus puberulis exceptis glaber, ramulis nigrescentibus, internodiis gracilibus modice elongatis; folia lanceolato-elliptica acute acuminata, basi subobtusa, latere altero paullo breviore, 12–13 cm. lata e medio inferiore pinnatinervia, nervis ca. 5×2, utrinque sublucida, petiolo vix 8–12 mm. longo infra medium vaginante; spicae 50 mm. longae 3 mm. crassae, pedunculo 5 mm. longo.

HONDURAS: Tela, in sandy soil along the beach, *Yuncker 4657* (type in herb. Univ. Illinois).

Piper adornatispicum Trelease, sp. nov.—Frutex 3-metralis facie *P. ornatispico* arcte similis, internodiis superioribus breviusculis gracilibus primo cinereo-tomentosis; folia elliptica vel sublanceolata

acute acuminata, basi oblique subcordulata, 16 cm. longa 5.5 cm. lata, e medio inferiore pinnatinervia, nervis ca. 6×2, supra minute pubescentia serius minute granuloso-asperata, nervis subtus apicem versus puberulis sed basi pubescentibus, rugescentia, petiolo 5+3–10+5 mm. longo pubescente; spicae 100 mm. longae 4 mm. crassae, pedunculo 10 mm. longo pubescente; bracteae rotundo-subpeltatae ciliolatae subzonatae.

HONDURAS: In a ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5885* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper allatum Trelease, sp. nov.—Frutex 1.5 m. altus, internodiis superioribus subgracilibus elongatis transiente puberulis; folia lanceolata ad subrhombeo-elliptica acuminata, basi angustata obtusa atque altero vel utroque latere cordulata, 15–20 cm. longa 5.5–10 cm. lata, e medio inferiore pinnatinervia, nervis ca. 5×2, subtus plus minusve puberulis, petiolo ca. 8+2 mm. longo minute pubescente; spicae in sicco viso valde juveniles et parvae.

HONDURAS: In a ravine at El Rincón, 10 miles west of Siguatepeque, Department of Comayagua, 1,400–1,500 meters, *Yuncker, Dawson & Youse 6068* (type in herb. Univ. Illinois).

Piper apertum Trelease, sp. nov.—Frutex metralis, internodiis floriferis gracilibus brevibus primo hispidis; folia subelliptica acute acuminata, basi subcordulata altero latere paulo breviore, 12–13 cm. longa 6 cm. lata, e medio inferiore pinnatinervia, nervis ca. 5×2, supra albo-granulosa, nervis subtus minute adpresso-pubescentibus, petiolo 8+2 mm. longo subhispido; spicae rectae 60 mm. longae 3 mm. crassae, pedunculo gracili fere 15 mm. longo glabrato, bracteis transverse subpeltatis ciliolatis; baccae teretes truncatae, stigmatibus 3 parvis sessilibus.

HONDURAS: Lake Yojoa, Department of Cortés, 630 meters, *Yuncker 4821* (type in herb. Univ. Illinois).

Piper apertum(?) var. **nodosum** Trelease, var. nov.—Nodosus; folia basi angustata inaequaliter cordulata, nervis subtus hispidis; inflorescentia?

HONDURAS: With the type, *Yuncker 4821* in part (type in herb. Univ. Illinois).

Piper arenicola Trelease, sp. nov.—Frutex vix 2-metralis, internodiis modicis transiente hirsutis; folia elliptica acute acumi-

nata, basi aliquanto inaequaliter obtusa, 12–16 cm. longa 6–7 cm. lata, e medio inferiore pinnatinervia, nervis ca. 5+4, vix rugosa, supra glabra sublucida, subtus pallida subpuberula, nervis hirsutis, petiolo vix 10 vel 5+5 mm. longo subhirsuto basi vaginante; spicae vix 40 mm. longae et 3 mm. crassae, pedunculo 5 mm. longo puberulo; bracteae parvae transverse subpeltatae ciliolatae.

HONDURAS: Sandy soil, Tela to Lancetilla Valley, at 27 meters, *Yuncker 4499* (type in herb. Univ. Illinois).

Piper auritum HBK. f. **rinconense** Trelease, forma nov.—Frutex vix 1.5 m. altus, ramulis gracilibus cito glabrescentibus; folia elongato-ovata subacuta, basi oblique auriculata, petiolo latere altero paullo longiore, 22–25 cm. longa 11–12 cm. lata, nervis subtus basin versus ut petiolo subvillosis, petiolo 50+2–5 mm. longo; inflorescentia?

HONDURAS: El Rincón, Siguatepeque, Department of Comayagua, 1,400–1,500 meters, *Yuncker, Dawson & Youse 6064* (type in herb. Univ. Illinois).

Piper auritum HBK. var. **amplifolium** C. DC. Wet ravine near El Achote, above Siguatepeque, Department of Comayagua, at 1,350 meters.

Piper calvescens Trelease, sp. nov.—Internodia florifera subgracilia brevia glabra; folia ovata subacute acuminata, basi rotundata vel acute contracta, modice parva 10–13.5 cm. longa 5–8 cm. lata, palmatim 5-nervia vel obscure 7-nervia, nervis prope basin aliquanto pubescentibus, petiolo brevi 5–10 vel ad 15 mm. longo, primo aliquanto villoso glabrescente; spicae oppositifoliae graciles sed sublongae 60–70 mm. longae 3–4 mm. crassae, pedunculo gracillimo brevi 10 mm. longo sed petiolum oppositum superante aliquanto pubescente; bracteae subpeltatae ciliolatae; flores sessiles perfecti; ovarium glabrum, stigmatibus 3 sessilibus.

HONDURAS: San Pedro Sula, Department of Santa Bárbara, *Thieme 5461* (type in U. S. Nat. Herb. No. 796,474 and, in part, No. 796,493).

Piper calvescens var. **pedunculatum** Trelease, var. nov.—Folia rotundo-elliptica subabrupte breviter acuminata, basi acuta, 13–14 cm. longa 9–10 cm. lata, 7-nervia, petiolo et pedunculo 10–15 mm. longis; spicae in statu fructifero 75 mm. longae 5 mm. crassae.

HONDURAS: Potrerillos, Department of Cortés, *Yuncker 4882* (type in herb. Univ. Illinois).

Piper calvescens var. **portrerillosense** Trelease, var. nov.—Gracilis nodosus nigrescens essentialiter glaber; folia elliptica graciliter acuminata, basi acuta, 7–10 cm. longa 4–6 cm. lata, 5-nervia, petiolo 5–10 mm. longo; spicae 50–70 mm. longae 5 mm. crassae densiflorae, pedunculo 5 mm. longo; bracteae subcrescenticae griseae; baccae ovoideae, stigmatibus parvis erectis.

HONDURAS: Potrerillos, Department of Cortés, *Yuncker 4894* (type in herb. Univ. Illinois).

Piper comayaguanum Trelease, sp. nov.—Frutex 2-metralis, internodiis gracilibus cito elongatis sordido-villosis; folia rotundo-ovata aromatica acuminata, basi rotundata vel inferiora cordata, 12–19 cm. longa 9–14 cm. lata, 5–7-nervia, primo supra pubescentia, nervis subtus pallidis hispidis, petiolo 10–15 mm. longo vel in foliis inferioribus ad 28 mm. subvilloso; spicae in siccis juveniles, pedunculo sordido-subvilloso.

HONDURAS: River bank about 6 km. north of Siguatepeque, Department of Comayagua, 1,300 meters, *Yuncker, Dawson & Youse 6310* (type in herb. Univ. Illinois).

Piper cristicola Trelease, sp. nov.—Frutex vel suffrutex 2-metralis, internodiis floriferis subgracilibus sed elongatis hirtellis sed ad et infra nodos glabrescentibus; folia ovata obtuse sed apiculate breviacuminata, basi fere aequilaterali cordata, 33 cm. longa 19–20 cm. lata, e tertio infimo subpinnatinervia, nervis longioribus ca. 6×2, intermediis interpositis, supra glabra viridia lucida, subtus pallidiora primo ad nervos hirtella, petiolo 5 cm. longo rigido-hirtello; inflorescentia?

HONDURAS: In forest at summit of the range above El Achote, near Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 6247* (type in herb. Univ. Illinois).

Piper Dawsoni Trelease, sp. nov.—Frutex vix 2-metralis, ramis gracilibus, internodiis elongatis evanescente villosis; folia lanceolata sensim subacuminata, basi obtusa, 10–19 cm. longa 3–4 cm. lata, e medio inferiore pinnatinervia, nervis 4–5×2, supra basibus pilorum brevium granuloso-scabra, subtus ad nervos subvillosa, petiolo 5 mm. longo subvilloso; spicae rectae apiculatae 80 mm. longae 3 mm. crassae, pedunculo 10 mm. longo villoso; bracteae rotundo-subpeltatae ciliatae.

HONDURAS: In a ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6283* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper Deamii Trelease, sp. nov.—*P. decrescens* var. *ovatum* C. DC. in DC. Prodr. 16, pt. 1: 251. 1869. Frutex ca. 2-metralis velutino-hirsutus, internodiis floriferis gracilibus brevibus; folia rotundo-ovata breviter acuminata, basi aperte cordata et intra sinum breviter cuneata, 8–10 cm. longa 6–8 cm. lata, 7–9-nervia, petiolo 10 mm. longo; spicae ca. 30 mm. longae et 2 mm. crassae, pedunculo 5 mm. longo.

NICARAGUA: "Guatemala," *Friedrichstahl* (type in Herb. Kew.); also in herb. Mus. Vienna as *No. 905*, from Granada. Known also from Salvador. [The locality is evidently Nicaraguan rather than Guatemalan, as listed in Dr. Trelease's original manuscript. Apparently all the Friedrichsthal plants at Vienna are labeled as from Guatemala, but fortunately the locality name usually is written on the label, from which it appears that a large number if not the majority of them are really from Nicaragua and Costa Rica.—P. C. Standley.]

Piper Deamii var **yojoanum** Trelease, var. nov.—Frutex nodosus 2-metralis, internodiis floriferis subgracilibus brevibus primo minute crispo-pubescentibus; folia ovata acuminata, basi cordulata vel breviter cordata, 7.5–9 cm. longa 4.5–5.5 cm. lata, 7-nervia, nervis praesertim subtus hirtellis, petiolo 10 mm. longo crispo-hirtello; spicae 35 mm. longae 5 mm. crassae, pedunculo 10 mm. longo plus minusve hirtello; baccae ovoideae, stigmatibus brevibus.

HONDURAS: Paral, Lake Yojoa, 630 meters, *Yuncker 4875* (type in herb. Univ. Illinois).

Piper deltoideocarpum Trelease, sp. nov.—Frutex 3-metralis, internodiis superioribus subgracilibus brevibus breviter molliter pubescentibus; folia ovata sensim subacuminata, basi paullo inaequilatera obtusa, ca. 16 cm. longa et 9 cm. lata, e tertio infimo pinnatinervia, nervis ca. 5×2, supra primo minute pubescentia serius paullo asperata, nervis subtus crispo-puberulis, petiolo 1–2 cm. longo; spicae 80 mm. longae 3 mm. crassae, pedunculo 5 mm. longo; aliquanto pubescente; bracteae triangulari-subpeltatae ciliatae; baccae plus minusve acute triquetrae.

HONDURAS: River bank near Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5654* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper epilosipes Trelease, sp. nov.—Frutex nodosus glaber vix 2-metralis facie spec. *P. atrichopus* similis, internodiis superioribus

brevibus gracilibus; folia anguste lanceolata sensim attenuata, basi angustata obvie obtusa, 10–12 cm. longa 3–4 cm. lata, e tertio infimo pinnatinervia, nervis longioribus 3×2, nervis brevibus sursum curvis fere ad apicem insertis, in sicco chartacea et paullo undata, petiolo 5 mm. longo vel in foliis inferioribus 10 mm. longo; spicae 40 mm. longae 2 mm. crassae, pedunculo 5 mm. longo; bracteae subcrescenticae; baccae depressae subrotundae, stigmatibus sessilibus.

HONDURAS: In a ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6296* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper epilosipes var. **heterophyllum** Trelease, var. nov.—Folia majora, 12–15 cm. longa 3–4 cm. lata, inferiora ovata atque 10 cm. longa et 4 cm. lata, petiolis infimis 15 mm. longis; spicae 50 mm. longae 3 mm. crassae, pedunculo 5–10 mm. longo.

HONDURAS: With the type, *Yuncker, Dawson & Youse 6097* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper exigens Trelease, sp. nov.—Frutex glaber vix 2.5 m. altus, internodiis superioribus gracilibus breviusculis; folia lanceolato-ovata acuminata, basi subobliqua acuta vel abrupte acutiuscula, 16–19 cm. longa 7.5–8 cm. lata, multiplinervia, nervis basalibus 2 paribus, utroque latere infra tertium supremum nervis 3 separatis additis, lucida, subcoriacea, petiolo 15 mm. longo; spicae 100 mm. longae 3 mm. crassae, pedunculo 10 mm. longo.

HONDURAS: Ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6124* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper exigens var. **subovatum** Trelease, var. nov.—Folia elongato-ovata ad 20 cm. longa atque 8.5 cm. lata, vel late ovata atque 9–12 cm. lata; spicae 110 mm. longae.

HONDURAS: With the type, *Yuncker, Dawson & Youse 5997* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper faviculiferum Trelease, sp. nov.—Pl. XI. Frutex aliquanto nodosus 1.5 m. altus, internodiis subgracilibus elongatis subpersistente molliter cinereo-pubescentibus; folia ovata subacuminata, basi breviter cordata, 12–20 cm. longa 6–13 cm. lata infra tertium supremum pinnatinervia, nervis ca. 6–7×2, bullato-alveolata, supra granuloso-scabra, nervis subtus breviter pubescentibus, petiolo 15–20 mm. longo griseo-pubescente; spicae paullo curvae 75 mm. longae 2 mm. crassae, pedunculo 8 mm. longo; bracteae subcrescenticae dense pilosae.

HONDURAS: Ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6368* (type in herb. Univ. Illinois).

Piper firmifolium Trelease, sp. nov.—Frutex nodosus glaber 3–4-metralis, internodiis superioribus brevibus gracilibus; folia lanceolata obtuse subacuminata, basi acuta, 6–8 cm. longa 2–3.5 cm. lata, saliente 3-nervia, foliis interdum ovatis, basi rotundato-cordatis, 8 cm. longis, 4 cm. latis atque 5-nervis, subtus paullo pallidiora, in sicco firma, petiolo 3 mm. longo; spicae vix 50 mm. longae atque 2 mm. crassae, pedunculo 5–10 mm. longo; bracteae rotundo-subpeltatae lanosae; baccae rotundae, stigmatibus sessilibus.

HONDURAS: Near El Rincón, about 10 miles west of Siguatepeque, Department of Comayagua, 1,400–1,500 meters, *Yuncker, Dawson & Youse 6048* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper fraguanum Trelease, var. **viride** Trelease, var. nov.—Folia 17–21 cm. longa 8–11 cm. lata subtus laete viridia; spicae 75 mm. longae 4 mm. crassae.

HONDURAS: Lancetilla Valley, at 27 meters, *Yuncker 4918* (type in herb. Univ. Illinois).

Piper inconsumptum Trelease, sp. nov.—Frutex 2–3-metralis glaber vel in nervis paginae inferioris folii puberulus, internodiis breviusculis gracilibus; folia lanceolato-elliptica plus minusve falcate breviacuminata, basi acuta latere altero solemniter breviore, 16–18 cm. longa 6–7 cm. lata, infra tertium supremum pinnatinervia, nervis 5×2, subtus pallidiora, petiolo fere 15+5 mm. longo basi tantum vaginante; spicae suberectae 90–125 mm. longae 3–4 mm. crassae pallido-zonatae, pedunculo 10 mm. longo; bracteae crescenticae vel triangulari-subpeltatae ciliolatae; baccae subteretes truncatae, stigmatibus parvis sessilibus.

HONDURAS: Forest near Paral, Lake Yojoa, Department of Cortés, 630 meters, *Yuncker 4871* (type in herb. Univ. Illinois), *4874*.

Piper laceratibracteum Trelease, sp. nov.—Frutex glaber nodosus ca. 2-metralis, ramis nigrescentibus, internodiis gracilibus striatis cito elongatis; folia lanceolata obtuse subacuminata, basi acuta, 9–10.5 cm. longa 3.5–5 cm. lata, 3-nervia vel obscurissime 5-nervia, subtus paullo pallidiora, in sicco crasse papyracea, petiolo vix 5 mm. longo; spicae 50–90 mm. longae 2 mm. crassae, pedunculo filiformi 10 vel usque ad 25 mm. longo; bracteae triangulari-subpel-

tatae, medio fuscae, margine lacerato pallido; ovarium depressum, stigmatibus sessilibus.

HONDURAS: Ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6226* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper laedans Trelease, sp. nov.—Frutex 1.5 m. altus, ramis geniculatis nodosis, internodiis brevibus gracilibus primo valde ferrugineo-villosis; folia lanceolata anguste acuminata, basi angustata obtusa latere altero breviore, 13–17 cm. longa 4.5–5.5 cm. lata, e medio inferiore pinnatinervia, nervis 4+3, albido-granuloso-scabra, nervis subtus villosis, petiolo 5–7+3 mm. longo villoso; spicae 60 mm. longae 3 mm. crassae fere rectae, pedunculo 10 mm. longo ferrugineo-villoso.

HONDURAS: Ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 5821* (type in herb. Univ. Illinois).

Piper monteluctans Trelease, sp. nov.—Frutex humilis plus minusve caespitosus glaber, internodiis superioribus gracillimis breviusculis; folia late lanceolata obtuso-acuminata, basi uno latere obtusa altero acute protracta, 12–16 cm. longa 4–6 cm. lata, e medio inferiore pinnatinervia, nervis ca. 4×2, in sicco tenuia viridia, petiolo 3–5+2 mm. longo; inflorescentia?

HONDURAS: Creeping over logs in forest, cloud zone on range above El Achote, near Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 6176* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper multinervium Mart. & Gal. *Artanthe Galeottii* Miq.; *P. aduncum*, *P. angustifolium*, *P. elongatum* of authors, as to Mexico and northern Central America; *P. xanthocladum* Trelease ex Standl. & Calderón, Lista Pl. Salv. 62. 1925, nomen. River bank, vicinity of Siguatepeque, 1,050 meters; also at 1,200 meters.

Piper multinervium var. **amplum** Trelease, var. nov.—Frutex evanescente puberulus; folia elliptico-lanceolata vix cordulata, 20 cm. longa 8 cm. lata, petiolo ca. 5+3 mm. longo; spicae curvae 90 mm. longae 2–3 mm. crassae, pedunculo 8–10 mm. longo.

GUATEMALA: La Libertad, Petén, *Lundell 2556* (type in herb. Univ. Michigan).

Piper multinervium var. **cayoense** Trelease, var. nov.—Frutex 1.5 m. altus persistente aliquanto puberulus; folia elliptico-

lanceolata acuminata, basi inaequaliter cordulata, 18 cm. longa 6–7 cm. lata, petiolo 3+2 mm. longo; spicae curvae fere 150 mm. longae 2–3 mm. crassae, pedunculo ca. 10 mm. longo.

BRITISH HONDURAS: El Cayo, *H. H. Bartlett 11570* (type in herb. Univ. Michigan).

Piper multinervium var. **flavicans** Trelease, var. nov.—Frutex nodosus 3-metralis, internodiis in statu juvenili brevibus et modice gracilibus rubescentibus dense velutinis; folia lanceolata sensim longiattenuata, basi inaequaliter obtusa, latere longiore ad petiolum acute decurrente, ca. 10–12 cm. longa atque 4 cm. lata, nervis adpresso-puberulis, petiolo 4+4 mm. longo primo velutino; spicae curvae 90 mm. longae 3 mm. crassae, pedunculo 15 mm. longo glabro.

HONDURAS: Siguatepeque, Department of Comayagua, 1,200 meters, *Yuncker, Dawson & Youse 5859* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper multinervium var. **hirsuticaule** Trelease, var. nov.—Frutex 4-metralis, ramulis primo molliter hirsutis; folia lanceolata acute acuminata, basi paullo obliqua cordulata, 15–20 cm. longa 4.5–5.5 cm. lata, petiolo 5+1 mm. longo molliter piloso; spicae curvae 50 mm. longae 2 mm. crassae, pedunculo 15 mm. longo sparse velutino.

HONDURAS: Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5724* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.); also, at 1,200 meters, *No. 5699*.

Piper multinervium var. **kantelolense** Trelease, var. nov.—Frutex valde nodosus transiente aliquanto puberulus, internodiis brevibus; folia lanceolata acuminata, basi inaequaliter obtusa vel subcordulata, 13–15 cm. longa 4–5 cm. lata, petiolo ca. 4+4 mm. longo; spicae curvae 100 mm. longae 2–3 mm. crassae, pedunculo 10 mm. longo.

GUATEMALA: La Libertad, Petén, *Lundell 3008* (type in herb. Univ. Michigan). Also at Kantelol, *Lundell 3168*.

Piper multinervium var. **paralense** Trelease, var. nov.—Arbuscula nodosa 5-metralis, trunco basi 5 cm. diam., ramulis evanescente puberulis serius minute infra nodos granulosis; folia elliptico-lanceolata graciliter acuminata, basi uno latere tantum cordulata, 15–19 cm. longa 5–6 cm. lata, petiolo 3+3 mm. longo; spicae curvae 110 mm. longae 3 mm. crassae, pedunculo 10–55 mm. longo glabrato.

HONDURAS: Paral, Lake Yojoa, Department of Cortés, 630 meters, *Yuncker 4877* (type in herb. Univ. Illinois).

Piper multinervium var. **peracutum** Trelease, var. nov.—Frutex 2–3-metralis transiente velutinus, nodis denudatis minute granulosis; folia late lanceolata vel elliptico-lanceolata sensim longi-acuminata, basi inaequaliter cordulata, 20 cm. longa 7–7.5 cm. lata, petiolo 4+3 mm. longo; spicae curvae 100 mm. longae 2 mm. crassae, pedunculo 12 mm. longo glabrato.

HONDURAS: Lancetilla Valley, near Tela, Department of Atlántida, 20–600 meters, *Paul C. Standley 54921* (type), *53083*.

Piper multinervium var. **productipes** Trelease, var. nov.—Frutex nodosus 3-metralis transiente aliquanto velutinus; folia lanceolata acuminata, basi inaequilaterali latere longiore ut in typo subauriculato-cordulato, 17 cm. longa 5.5 cm. lata; spicae curvae 90–100 mm. longae 3 mm. crassae, pedunculo 15 mm. longo.

HONDURAS: Ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 5819* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper multinervium var. **protractifolium** Trelease, var. nov. —Frutex vix 3-metralis, ramulis glabratis purpurascentibus; folia elliptica atque 15 cm. longa et 5.5 cm. lata, vel elongata, 18 cm. longa 5 cm. lata, acute acuminata, basi subobtusa latere altero breviore, nervis subtus aliquanto tomentulosis, petiolo 3+3 mm. longo glabrato; spicae curvae 100 mm. longae 2 mm. crassae, pedunculo gracili 15 mm. longo glabrato.

HONDURAS: Pine forest above Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5668* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper multinervium var. **puberulipedunculum** Trelease, var. nov.—Frutex altus 5-metralis, trunco 7.5 cm. diam., ramulis transiente adpresso-pilosis; folia subovato-lanceolata acuminata, basi obliqua obtusa latere breviore subcordulato, 14–19 cm. longa 5–7 cm. lata, nervis puberulis, petiolo ca. 3+3 mm. longo glabrato; spicae curvae vix 90 mm. longae et 2 mm. crassae, pedunculo gracili velutino 6–10 mm. longo.

HONDURAS: El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 5876* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper multinervium var. **pubescenticaule** Trelease, var. nov.—Arbor 10-metralis in statu juvenili rubescens, ramulis primo dense subtomentosis; folia elongato-lanceolata acuminata basi oblique subacuta, 12–20 cm. longa 4–6 cm. late, aliquanto rugescentia, nervis subtus prominentibus puberulis, petiolo 5+2 mm. longo; spicae ca. 50 mm. longae et 2 mm. crassae, pedunculo velutino 10 mm. longo.

HONDURAS: Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5731* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper multinervium var. **Skutchii** Trelease, var. nov.—Frutex 5-metralis evanescente sparse sericeus; folia late lanceolata 17–26 cm. longa 5.5–7.5 cm. lata basi inaequaliter cordulata, petiolo vix 3+3 mm. longo; spicae 90 mm. longae 2–3 mm. crassae, pedunculo 15 mm. longo.

GUATEMALA: Colomba, Department of Quezaltenango, 900 meters, *A. F. Skutch 1299.*

Piper multinervium var. **tamashense** Trelease, var. nov.—Frutex 2-metralis, trunco 3 cm. crasso, evanescente puberulus; folia lanceolata vel elliptico- vel subovato-lanceolata acuminata, basi inaequaliter cordulata, 15–18 cm. longa 4.5–7 cm. lata, petiolo ca. 5+5 mm. longo; spicae in sicco viso juveniles et brevipedunculatae.

BRITISH HONDURAS: Tamash River, 30 meters, *W. A. Schipp 1382.*

Piper multinervium var. **telanum** Trelease, var. nov.—Frutex 2–3-metralis subpersistente puberulus; folia late lanceolata vel elliptico-lanceolata acuminata, basi inaequaliter cordulata, 16–18 cm. longa 5–6.5 cm. lata subrugescentia, petiolo ca. 3+3 mm. longo glabrato; spicae curvae 90 mm. longae 2–3 mm. crassae, pedunculo 10 mm. longo puberulo.

HONDURAS: Tela, Department of Atlántida, 20–600 meters, *Paul C. Standley 53264* (type in Herb. Field Mus.); Tela River, *Yuncker 4512;* Tela to Lancetilla Valley, 30 meters, *Yuncker 4498* (folia 16 cm. tantum longa).

Piper mystaciferum Trelease, sp. nov.—Frutex 2-metralis, internodiis superioribus modice gracilibus et elongatis primo dense curvo-pilosis; folia lanceolata sensim subacuminata, basi obtusa latere altero breviore, 15–18 cm. longa 5–6 cm. lata e medio inferiore pinnatinervia, nervis 4×2 venis transversis connexis, supra dense adpresso-pubescentia et asperata, costa barbata, petiolo ca. 6+4 mm.

longo piloso; spicae in sicco viso juveniles atque 35 mm. longae, 2 mm. crassae, pedunculis pilosis 10 mm. longis.

HONDURAS: Ravine at El Rincón, 10 miles west of Siguatepeque, Department of Comayagua, 1,300–1,400 meters, *Yuncker, Dawson & Youse 6054* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper nubigaudens Trelease, sp. nov.—Frutex vix 3-metralis, internodiis superioribus gracilibus substrigosis brevibus; folia lanceolata sensim acuminata, basi paullo inaequilaterali obtusa, 9–11 cm. longa 3.5–4 cm. lata, e medio inferiore pinnatinervia, nervis ca. 3×2, glabra, in sicco chartacea fragrantia, petiolo vix 5 mm. longo substrigoso; spicae 55 mm. longae 3–4 mm. crassae, pedunculo ca. 7 mm. longo; bracteae crescenticae; baccae depressae cum rhachi elongatae, stigmatibus sessilibus.

HONDURAS: Cloud zone forest above El Achote, near Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 5991* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper ornatispicum Trelease, sp. nov.—Frutex 3-metralis, internodiis floriferis breviusculis modice crassis primo griseo-tomentosis; folia elliptica subacuminata, basi inaequilateralia uno latere obtusa, 14–16 cm. longa 7–8 cm. lata, e medio inferiore pinnatinervia, nervis 5×6, primo supra minute pubescentia serius granuloso-asperata, subtus puberula, non rugosa, petiolo 10 mm. vel 15+5 mm. longo primo pallido-tomentoso; spicae 80 mm. longae 3 mm. crassae, pedunculo 5 mm. longo pubescente; bracteae triangulari-subpeltatae pallidae, ovariis fuscis.

HONDURAS: Thicket on river bank near Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5618* (type in herb. Univ. Illinois).

Piper paludicola Trelease, sp. nov.—Frutex 3-metralis inferne nodosus, internodiis floriferis brevibus modice gracilibus primo molliter pilosis serius breviter velutinis; folia lanceolato-elliptica vel ovato-elliptica acute acuminata, basi aliquanto inaequaliter cordulata, 11–17 cm. longa 5–7 cm. lata, e medio inferiore pinnatinervia, nervis 4–5×2, aliquanto rugosa, supra valde lucida obscure viridia glabra, subtus pallidiora subpuberula, nervis breviter hirsutis, petiolo 10–15 mm. longo subhirsuto infra medium vaginante; spicae 50–60 mm. longae 3–4 mm. crassae, pedunculo 5 mm. longo glabrato; baccae rotundae griseae.

HONDURAS: In marsh near Tela, Department of Atlántida, *Yuncker 4977* (type in herb. Univ. Illinois).

Piper petens Trelease, sp. nov.—Frutex paullo plus quam 2 m. altus petiolis et nervis subtus obscure puberulis exceptis glaber, internodiis gracilibus primo brevibus; folia elongato-elliptica acute acuminata, basi paullo inaequilateralia et vulgo acuta, 11–18 cm. longa 5.5–7 cm. lata e medio inferiore pinnatinervia, nervis 5+4, in sicco papyracea, petiolo 10+3 mm. longo; spicae in sicco viso juveniles vix 10 mm. longae et 1 mm. crassae apiculatae griseae breviter pedunculatae.

HONDURAS: Ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6107* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper pictamentum Trelease, sp. nov.—Frutex nodosus 1–2-metralis, internodiis crassis brevibus pallidis pallido-tomentosis; folia elliptica vel oblongo-elliptica acuta, basi inaequaliter cordulata, 6–12.5 cm. longa 3–5.5 cm. lata, supra manifeste granulosa, subtus ad nervos pallido-villosa, e medio inferiore pinnatinervia, nervis 6×2, petiolo 5 mm. longo tomentoso-subvilloso; spicae rectae vel curvae 80 mm. longae 3 mm. crassae, pedunculo 10 mm. longo tomentoso; bracteae rotundo-subpeltatae ciliatae pallidae et manifeste ut in *P. Yunckeri* zonatae.

HONDURAS: Rocky hillside, Siguatepeque, Department of Comayagua, 1,100 meters, *Yuncker, Dawson & Youse 5902* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper pictamentum var. **fluminis** Trelease, var. nov.—Forma multo gracilior minus tomentosa, aliter ut in forma typica speciei.

HONDURAS: River bank, Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5718* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper praemollitum Trelease, sp. nov.—Frutex vix 3-metralis, internodiis superioribus gracilibus brevibus primo tomentulosis; folia ovato-elliptica acuminata, basi rotundata altero latere paullo majore, 15–17 cm. longa 6.5–9 cm. lata e medio inferiore pinnatinervia, nervis ca. 6+5, supra puberula, subtus pallidiora aliquanto tomentulosa, petiolo ca. 10+2 mm. longo tomentuloso; spicae 70 mm. longae 2 mm. crassae, pedunculo vix 5 mm. longo puberulo.

HONDURAS: Near shore of Lake Yojoa, Department of Cortés, 630 meters, *Yuncker 4825* (type in herb. Univ. Illinois).

Piper rinconense Trelease, sp. nov.—Frutex vix 3-metralis, faciem *P. Yousei* simulans, internodiis superioribus subgracilibus brevibus primo subsericeis non nigrescentibus; folia elliptica vel sublanceolata acuminata, basi inaequilaterali altero vel ambobus lateribus rotundata, 14–15 cm. longa 6 cm. lata e medio inferiore pinnatinervia, nervis 5+6, subtus puberula, petiolo 5–7+3 mm. longo aliquanto pubescente; spicae in sicco viso juveniles vix 15 mm. longae et 2 mm. crassae, pedunculo curvo glabrato vix 5 mm. longo.

HONDURAS: Ravine near El Rincón, about 10 miles west of Siguatepeque, Department of Comayagua, 1,400–1,500 meters, *Yuncker, Dawson & Youse 6052* (type in herb. Univ. Illinois).

Piper roseovenulosum Trelease, sp. nov.—Frutex vix 3-metralis, internodiis floriferis graciusculis brevibus primo griseo-pubescentibus cito glabrescentibus; folia lanceolato-elliptica subfalcate longiacuminata, basi inaequilateralia latere breviore saepe acuto, 10–15 cm. longa 4–8 cm. lata e medio inferiore pinnatinervia, nervis 4×2, subtus griseo-pubescentia, supra lepidoto-asperata et subtus scabrida, aliquanto rugosa, subtus pallidiora, venis in vivo roseis, petiolo ca. 6+4 mm. longo griseo-subscabrido; spicae 70 mm. longae 3 mm. crassae, pedunculo vix 10 mm. longo scabrido.

HONDURAS: Near Paral, shore of Lake Yojoa, Department of Cortés, 630 meters, *Yuncker 4873* (type in herb. Univ. Illinois).

Piper scabriseptum Trelease, var. **reductum** Trelease, var. nov.—Caule magis glabrescente; folia 12–14 cm. longa 5.5–7 cm. lata, petiolo ad 10 mm. longo.

HONDURAS: Lancetilla Valley, Department of Atlántida, 27 meters, *Yuncker 4773* (type in herb. Univ. Illinois).

Piper scalarispicum Trelease, sp. nov.—Frutex subnodosus ramulosus vix 2-metralis, internodiis floriferis graciusculis brevibus primo velutinis; folia anguste lanceolata longiattenuata, basi plus minusve obtusa, 10–13 cm. longa 3–3.5 cm. lata e medio inferiore pinnatinervia, nervis longioribus ca. 3×2, subtus crispo-velutina, petiolo vix 5 mm. longo; spicae 60–80 mm. longae 4 mm. crassae, pedunculo 10 mm. longo puberulo; bracteae triangulari-subpeltatae ciliatae scalariformi-zonatae; baccae depressae rotundatae cum rhachi elongatae, stigmatibus sessilibus.

HONDURAS: Cloud zone at summit of the range above El Achote, near Siguatepeque, Department of Comayagua, 1,800–2,000 meters, *Yuncker, Dawson & Youse 6156* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper siguatepequense Trelease, sp. nov.—Frutex divaricate ramosus 2.5 m. altus, internodiis superioribus gracilibus breviusculis persistente molliter velutinis; folia elliptico- vel rhombeo-subobovata acute acuminata, plerumque basi obtusa, 8–10 cm. longa 4.5–5 cm. lata 5-nervia, supra plus minusve persistente minute pubescentia, subtus pallidiora ad nervos velutina, petiolo vix 10 mm. longo velutino; spicae curvae 70 mm. longae 3 mm. crassae, pedunculo 5 mm. longo velutino; bracteae subcucullatae pilosae; baccae ovoideae, stigmatibus sessilibus.

HONDURAS: River bank near Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 6042* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper siguatepequense var. **subrhombifolium** Trelease, var. nov.—Folia rhombeo-ovata 12–13 cm. longa 6–7 cm. lata basi subtruncata; spicae 80 mm. longae.

HONDURAS: Region of the type, *Yuncker, Dawson & Youse 5617* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper tenuiculispicum Trelease, sp. nov.—Arbuscula 5-metralis, internodiis floriferis breviusculis gracilibus primo breviter pubescentibus nodis exceptis glabrescentibus; folia elliptica graciliter acuminata, basi obtusa latere altero paullo breviore, 13–17 cm. longa 5.5–9.5 cm. lata e medio inferiore pinnatinervia, nervis ca. 5+6, manifeste scabrida, nervis subtus ferrugineo-substrigosis, petiolo vix 10 mm. longo hispido; spicae 60 mm. longae 2 mm. crassae, pedunculo 5–6 mm. longo hispido.

HONDURAS: Bank of Tela River above Lancetilla Valley, Department of Atlántida, 27 meters, *Yuncker 4509* (type in herb. Univ. Illinois).

Piper tesseraespicum Trelease, sp. nov.—Frutex 3-metralis, ramulis ut petiolis nervisque subtus puberulis, internodiis floriferis gracilibus subelongatis; folia subrhombeo-obovata vel elliptica obtuso-acuminata, basi obtusa latere altero breviore, 24 cm. longa 13 cm. lata e medio inferiore pinnatinervia, nervis 5+6, in sicco tenuia viridia venosa minute granuloso-asperata, petiolo ca. 15+3 mm. longo; spicae 60 mm. longae 3 mm. crassae, bracteis deltoideis manifeste pilosis, pedunculo ca. 5 mm. longo; baccae triquetrae.

HONDURAS: River bank near Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 5662* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper viae-marginis Trelease, sp. nov.—Frutex nodulosus ramosus 2-metralis, internodiis superioribus gracilibus breviter albido-tomentosis; folia late vel subrhombice elliptica obtuse acuminata, basi inaequaliter subcordulata, 9–15 cm. longa 4.5–7 cm. lata e medio inferiore pinnatinervia, nervis 4–5×2, utrinque puberula, subtus pallidiora et primo albo-tomentulosa, subrugulosa, petiolo 10–15 mm. longo; spicae 60 mm. longae 4 mm. crassae, pedunculo 5 mm. longo velutino; bracteae subcrescenticae ciliatae; baccae triquetrae truncatae, stigmatibus sessilibus.

HONDURAS: Side of trail, near Siguatepeque, Department of Comayagua, 1,050 meters, *Yuncker, Dawson & Youse 6044* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper Yousei Trelease, sp. nov.—Frutex glaber vix 2-metralis, internodiis floriferis gracilibus brevibus sed cito elongantibus nigrescentibus; folia subelliptica acuminata, basi oblique acuta, 9–14 cm. longa 5.5–6.5 cm. lata e medio inferiore pinnatinervia, nervis 4×2, in sicco papyracea, subtus pallidiora, petiolo 5 vel 5+3–5 mm. longo; spicae in sicco viso juveniles vix 10 mm. longae et 1 mm. crassae pendulae, pedunculo minus quam 5 mm. longo.

HONDURAS: El Achote near Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 5999* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.). El Rincón, 1,400–1,500 meters, *Yuncker, Dawson & Youse 6070.*

Piper Yunckeri Trelease, sp. nov.—Frutex nodosus ramosissimus 1.5 m. altus, internodiis brevibus crassis pallidis persistente tomentulosis; folia subelongato-elliptica acuta basi cordulata 9–10 cm. longa 3.5–4 cm. lata e medio inferiore pinnatinervia, nervis ca. 5×2, utrinque tomentulosa vel glabrescentia, petiolo 5 mm. longo tomentuloso; spicae rectae vel curvae 60–110 mm. longae 3 mm. crassae, pedunculo 10 mm. longo puberulo; bracteae conspicuae rotundo-subpeltatae, margine pallido ciliato; baccae rotundatae, stigmatibus sessilibus.

HONDURAS: Subalpine bog near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6331* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Piper Yunckeri var. **latum** Trelease, var. nov.—Forma humilis immatura vix metralis, foliis inferioribus latioribus.

HONDURAS: With the type, *Yuncker, Dawson & Youse 6333* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

CHLORANTHACEAE

HEDYOSMUM Sw.

Hedyosmum Artocarpus Solms. A tree 6–7.5 meters tall and 12–15 cm. in diameter; aromatic. In a wet ravine near El Achote. The tree is new to the flora of Honduras.

MYRICACEAE

MYRICA L.

Myrica mexicana Willd. A shrub about 1 meter tall, aromatic. Edge of a ravine near El Achote.

BETULACEAE

OSTRYA (Michx.) Scop.

Ostrya virginiana var. **guatemalensis** (Winkl.) Macbr. A tree about 9 meters tall and 15 cm. in diameter. Ravine near El Achote.

FAGACEAE

QUERCUS L.

Quercus achoteana Trelease, sp. nov.—*Leucobalanos-Macrophyllae*(?). Ramuli crassiusculi 4–5 mm. crassi substriati glabrescentes grisei, lenticellis pallidis; gemmae ovoideae magnae glabrae lucidae rubescentes; stipulae plus minusve persistentes setaceae; folia decidua subobovata obtusa basi cordulata mucronulato-crenata 16 cm. longa 8 cm. lata, supra viridia glabra, subtus cito glabrescentia, nervis 12–13×2 non arcuato-conjunctis; petiolus glabrescens brevis crassus; flores et fructus?—A small tree, 5 meters tall, the trunk 15 cm. in diameter.

HONDURAS: In pine-oak association near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6136* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Quercus achoteana var. **sublanosa** Trelease, var. nov.—Ramuli et praesertim folia subtus subpersistente ferrugineo-tomentosa; folia obovata vel subpandurate elongata apiculato-crenata 9–18 cm. longa 5–10 cm. lata obtusa, basi cordulata.—A small tree, 5 meters tall, the trunk 10 cm. in diameter.

HONDURAS: Thicket on plain, Siguatepeque, Department of Comayagua, 1,000–1,100 meters, *Yuncker, Dawson & Youse 5961* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Quercus amissaeloba Trelease, sp. nov.—*Erythrobalanos-Perseaefoliae*(?). Ramuli graciusculi 2–3 mm. crassi striati, primo subgrisei serius fuscescentes et punctis minutis albis conspersi; folia persistentia chartacea praesertim subtus lucida, late obovata et 6.5 cm. longa, 4 cm. lata, vel suboblonga et 9–12 cm. longa 3.5–5 cm. lata, obtusa, paullo crispata, integra vel interdum apice bilobulata, basi subacuta vel subcordulata, petiolo vix 5 mm. longo; inflorescentia?—A small, glabrous tree 6 meters tall, the trunk 10–15 cm. in diameter.

HONDURAS: In ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6379* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Quercus Dawsoni Trelease, sp. nov.—*Erythrobalanos-Acutifoliae*(?). Ramuli graciles 2–3 mm. crassi vix striati transiente aliquanto velutini; gemmae juveniles subglobosae glabratae; stipulae caducae; folia decidua oblanceolata acuminata, ad petiolum gracilem longiattenuata, 15–17 cm. longa 5 cm. lata, in fere toto margine cuspidato-serrata, cito glabrescentia et lucida, nervis 10–12×2, petiolo 1–2 cm. longo; inflorescentia?—A small tree, 3 meters tall, the trunk 7–8 cm. in diameter.

HONDURAS: In ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6378* (type in herb. Univ. Illinois).

Quercus perseaefolia(?) Liebm. var. **achoteana** Trelease, var. nov.—*Erythrobalanos-Perseaefoliae.* Glabra; ramuli 2–3 mm. crassi grisei inconspicue lenticellati; gemmae rotundatae vel ovoideae 2–3 mm. longae 2 mm. crassae; folia persistentia suboblonga utrinque subacuta vel obtusa et basi aliquanto inaequaliter obtusa, 7–15 cm. longa 3–4 cm. lata, integra chartacea subcrispata paullo lucida, petiolo vix 5 mm. longo; inflorescentia?—A small tree, 4 meters tall, the trunk 5–7 cm. in diameter.

HONDURAS: In thicket west of El Achote, above Siguatepeque, Department of Comayagua, 1,300 meters, *Yuncker, Dawson & Youse 6203* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Quercus pertessellata Trelease, sp. nov.—*Erythrobalanos-Syntheticae*(?). Glabra; ramuli graciles 2–3 mm. crassi striati, primo rubescentes serius grisei vel ochracei, lenticellis inconspicuis; folia decidua sublanceolato-oblonga acuminata, basi acuta, 15–16 cm. longa 4–5 cm. lata crasse papyracea, supra obscure viridia, utrinque cancellate venosa, nervis ca. 12×2 arcuato-conjunctis, petiolo

5–10 mm. longo gracili; inflorescentia?—A small tree, 3 meters tall, the trunk 5–7 cm. in diameter.

HONDURAS: In ravine near El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6376* (type in herb. Univ. Illinois).

Quercus tenuiaristata Trelease, sp. nov.—*Erythrobalanos-Tristes*(?). Ramulis transiente subvelutinis gracilibus 2–4 mm. crassis striatis subgriseis vix lenticellatis exceptis glabra; gemmae ovoideae glabratae; folia decidua oblongo-lanceolata vel ellipticolanceolata apice aristata, basi obtusa ad late rotundata, grosse serrata, nervis 12–15 dentibus graciliter setiferis terminatis, petiolo vix 5 mm. longo; inflorescentia?—A small tree, 3 meters tall, the trunk 5–7 cm. in diameter.

HONDURAS: In thicket west of El Achote, above Siguatepeque, Department of Comayagua, 1,400 meters, *Yuncker, Dawson & Youse 6204* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Quercus trichodonta Trelease, sp. nov.—*Erythrobalanos-Acutifoliae*(?). Ramulis novellis pallido-puberulis exceptis glabra; ramuli 3–5 mm. crassi vix striati vel lenticellati; folia decidua lanceolata e medio utrinque angustata, integra, nervis 15 et ultra delicate aristatis, vel supra medium grosse crenata dentibus graciliter aristatis, subtus pallidiora, nervis albis, petiolo crasso vix 5 mm. longo; inflorescentia?—A small tree, 6 meters high, the trunk 5–7 cm. in diameter.

HONDURAS: In ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6116* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Quercus Yousei Trelease, sp. nov.—*Leucobalanos-Corrugatae*(?). Ramuli pallidi glabri graciles; gemmae subglobosae glabratae; stipulae 2 mm. longae deciduae striatae; folia decidua prope nodos dense inserta lanceolata obtuse subacuminata, basi cordulata, petiolo brevissimo, supra medium grosse obtuseque crenato-serrata, 14–15 cm. longa 3.5 cm. lata, nervis ca. 12–15×2; inflorescentia?—A small tree, 4 meters tall, the trunk 5–6 cm. in diameter.

HONDURAS: Ravine at El Achote, above Siguatepeque, Department of Comayagua, 1,350 meters, *Yuncker, Dawson & Youse 6297* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

Quercus Yunckeri Trelease, sp. nov.—*Leucobalanos-Circinatae*(?). Ramuli crassiusculi 4–5 mm. crassi striati ferrugineo-villosi; folia ut videtur ad nodos anni prioris fasciculata late oblanceo-

lata acute acuminata, versus basin integra longicuneata, supra medium subgrosse mucronato-serrata, 22 cm. longa 9 cm. lata, primo subtus laxe tomentosa, nervis 15×2 non arcuato-conjunctis, petiolo fere nullo; fructus?—A small tree, 6 meters tall, the trunk 5–7 cm. in diameter.

HONDURAS: In dense forest near the summit of the range above El Achote, above Siguatepeque, Department of Comayagua, 1,800 meters, *Yuncker, Dawson & Youse 6180* (type in herb. Univ. Illinois; duplicate in Herb. Field Mus.).

ULMACEAE

CHAETOPTELEA Liebm.

Chaetoptelea mexicana Liebm. A tree about 6 meters tall and 15 cm. in diameter. In a marsh near El Achote.

MORACEAE

CECROPIA L.

Cecropia mexicana Hemsl. A tree about 7.5 meters tall and 10–12 cm. in diameter. In a wet ravine near El Achote.

DORSTENIA L.

Dorstenia Contrajerva L. River bank.

FICUS L.

Ficus costaricana (Liebm.) Miq. A tree about 9 meters tall and 1–1.5 meters in diameter. In a wet ravine near El Achote. This tree has not been recorded for Honduras.

Ficus glabrata HBK. A fine, broad-topped tree about 15 meters tall and 60 cm. in diameter. River bank.

Ficus involuta (Liebm.) Miq. A tree about 4–5 meters tall and 30 cm. in diameter. River bank.

Ficus padifolia HBK. A tree about 8 meters tall and 60 cm. in diameter. River bank.

Ficus radula Willd. A tree about 9 meters tall and 60 cm. in diameter. River bank.

Ficus velutina Willd. A tree about 6 meters tall and 10 cm. in diameter. In a wet ravine near El Achote.

MORUS L.

Morus multicaulis Perr. A small plantation of this species was found near Siguatepeque.

TROPHIS L.

Trophis chorizantha Standl. A tree about 7.5 meters tall and 10 cm. in diameter. Near the summit of the range above El Achote. This tree, known formerly only from Honduras, has been collected recently in the region of El General, Costa Rica.

URTICACEAE

BOEHMERIA Jacq.

Boehmeria caudata Sw. Flowers greenish white. River bank about 6 km. west of Siguatepeque.

MYRIOCARPA Benth.

Myriocarpa yzabalensis (D. Sm.) Killip. A tree about 4.5 meters tall. In a wet ravine near El Achote.

LORANTHACEAE

PHORADENDRON Nutt.

Phoradendron commutatum Trel. On a tree near Potrerillos.

Phoradendron piperoides (HBK.) Trel. On a tree near the shore of Lake Yojoa.

Phoradendron yojoanum Trelease, sp. nov.—*Aequitoriales-Annulatae.* Plus minusve pseudodichotoma, cataphyllis omnibus basalibus, subconspicue nodosa, internodiis breviusculis 3–5 cm. longis, infra nodos ancipitibus, alibi in sectione rhombeis vel teretibus; par cataphyllorum 1 basale, cataphyllis annulatis; folia plus minusve falcate oblanceolata obtusa, basi cuneato-contracta vix petiolata, 5–6 cm. longa 1–2 cm. lata, opaca subpapillata basinervia, nervis apicem versus evanescentibus; spicae breves vix 2 cm. longae, articulis ca. 4 clavatis, floribus luteis 4-seriatim insertis, pedunculo brevi; baccae ut dicitur albae.

HONDURAS: Paral, Lake Yojoa, Dept. Cortés, at 630 meters, *T. G. Yuncker 4879* (type in Herb. Univ. Illinois), *4872.*

Phoradendron Yunckeri Trelease, sp. nov.—*Aequitoriales-Heydeanae.* Aliquanto pseudodichotoma glabra, internodiis breviusculis 3–4 cm. longis primo infra nodos ancipiti-dilatatis cito teretibus; par cataphyllorum 1 basale in nodo infimo tantum insertum, cataphyllis patentibus; folia oblonga vel elliptica aliquanto falcata obtusa, basi cuneatim in petiolum 10 mm. longum angustata, firma opaca pinnatinervia, costa percurrente, 5–7 cm. longa 2.5–3 cm. lata; spicae solitariae longiusculae 40–50 mm. longae, articulis ca. 4

gracilibus subfusiformibus, floribus 4+2-seriatim insertis, pedunculo vix 5 mm. longo; fructus juvenilis globosus, sepalis arcte inflexis.

HONDURAS: Near Paral, Dept. Cortés, 630 meters, *T. G. Yuncker 5097* (type in herb. Univ. Illinois).

STRUTHANTHUS Mart.

Struthanthus cassythoides Millsp. On an oak tree near El Achote.

Struthanthus densiflorus (Benth.) Standl. On pine. Hills east of Siguatepeque.

Struthanthus orbicularis (HBK.) Blume. On a tree about 12 km. west of Tela.

POLYGONACEAE

COCCOLOBA L.

Coccoloba cardiophylla Standl. A small tree about 4.5 meters tall and 10 cm. in diameter. On plains. The species has been known previously only from the Yucatan Peninsula, and was scarcely to be expected in central Honduras.

POLYGONUM L.

Polygonum hispidum HBK. Flowers white. In a marsh.

Polygonum punctatum Ell. In a marsh near the shore of Lake Yojoa.

NYCTAGINACEAE

BOERHAAVIA L.

Boerhaavia erecta L. In waste places near Potrerillos.

MIRABILIS L.

Mirabilis Jalapa L. Flowers pink or white. Escaped along bank of river.

PHYTOLACCACEAE

PHYTOLACCA L.

Phytolacca Meziana H. Walt. An herb. Perianth greenish to somewhat pink. Sprawling over shrubs and on the ground in the forest near the summit of the range above El Achote.

Phytolacca rivinoides Kunth & Bouché. Stems 12–14 mm. thick at the base and somewhat woody; racemes up to 60 cm. long; flowers pinkish white; berries purple. Sprawling over shrubs in forest near the summit of the range above El Achote.

CARYOPHYLLACEAE

ARENARIA L.

Arenaria lanuginosa (Michx.) Rohrb. A prostrate herb with white flowers. River bank.

DRYMARIA Willd.

Drymaria villosa Schl. & Cham. A low herb. A very common weed, in waste places.

RANUNCULACEAE

THALICTRUM L.

Thalictrum hondurense Standl., sp. nov.—Herba perennis ca. metralis, caule crassiusculo tereti superne dense glanduloso-puberulo inferne fere glabro, internodiis elongatis; folia magna, petiolo 2–2.5 cm. longo ad vel fere ad apicem late vaginato, vagina nervosa glabra; foliola numerosa paullo supra basin peltata membranacea ambitu rotundata vel obovato-rotundata, interdum ovato-rotundata, plerumque 2–2.5 cm. longa, longipetiolulata, plerumque plus minusve triloba et vulgo grosse paucicrenata, supra sparse glandulosa, subtus ubique glanduloso-scaberula, pallida, venis valde elevatis laxe reticulatis; flores dioeci, feminei laxe paniculati, panicula magna laxa, floribus ad 2.5 cm. longe pedicellatis; achaenia vulgo 2–3 sessilia glanduloso-puberula valde obliqua et curva, immatura fere 5 mm. longa, basi acuta, apice acuta et subito in stylum filiforme usque 6 mm. longum contracta, tenuiter costata.—Honduras: On rocky hillside near Siguatepeque, Dept. Comayagua, July 11, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5796* (type in Herb. Field Mus.).

"Plants more or less viscid and with a pungent odor; roots a rich yellow color." Closely related to *T. guatemalense* C. DC. & Rose, which is noteworthy for the much longer and denser pubescence found on all parts of the plant.

MENISPERMACEAE

CISSAMPELOS L.

Cissampelos Pareira L. A woody vine. Climbing over shrubs in a thicket near Potrerillos.

Cissampelos tropaeolifolia DC. A woody vine. Climbing over shrubs. River bank.

ANNONACEAE

GUATTERIA Ruiz & Pavón

Guatteria grandiflora Donn. Sm. A tree 6–7.5 meters tall and 10–12 cm. in diameter. Perianth yellow-buff tinged with pink. In a wet ravine near the summit of the range above El Achote.

SAPRANTHUS Seem.

Sapranthus microcarpus (D. Sm.) Fries. A shrub about 2 meters tall. Corolla dull, dark red; flowers fragrant. River bank.

MONIMIACEAE

SIPARUNA Aubl.

Siparuna nicaraguensis Hemsl. A small tree about 4.5 meters tall and 3–5 cm. in diameter; fruit dark red, fleshy. Bottom of a ravine near El Achote; also in a thicket near the shore of Lake Yojoa.

LAURACEAE

LITSEA Lam.

Litsea glaucescens HBK. A tree about 2.5–3 meters tall and 3–5 cm. in diameter. In a wet ravine near El Achote. New to the Honduran flora.

NECTANDRA Roland

Nectandra sanguinea Rottb. A shrub 3.5–4.5 meters tall. In a thicket west of El Achote.

Nectandra surinamensis Mez. A tree about 9 meters tall and 15–20 cm. in diameter; corolla white; flowers fragrant. In a ravine about 6 km. west of Siguatepeque.

PHOEBE Nees

Phoebe helicterifolia Mez. A tree about 7 meters tall and 15 cm. in diameter. River bank.

Phoebe mexicana Meissn. A tree about 9 meters tall and 45 cm. in diameter River bank.

CRASSULACEAE

BRYOPHYLLUM Salisb.

Bryophyllum pinnatum (L.) Kurz. An herb about 1 meter tall; flowers reddish. River bank.

HAMAMELIDACEAE

DISTYLIUM Sieb. & Zucc.

Distylium guatemalense Radlk. ex Harms, Notizbl. Bot. Gart. Berlin 11: 716. *f. 13.* 1933.—A tree about 9 meters high and 20–25 cm. in diameter; in wet ravine near El Achote, hills above the plains of Siguatepeque, 1,350 meters, *Yuncker, Dawson & Youse 6377.* This tree is the only American representative of the genus *Distylium*, represented otherwise by about nine species in tropical and subtropical southeastern Asia. Its occurrence in Guatemala (where first collected by Tuerckheim in 1907, near Cobán, at 1,350 meters, *No. II. 1613*) and Honduras is, therefore, a matter of more than passing interest from the standpoint of distribution of the Hamamelidaceae. The Tuerckheim material is in flower, and at that stage the plant at first glance gives little indication of its relationship with this group, at least to one not especially familiar with the family. A specimen of the Tuerckheim number sent me some years ago from the Delessert Herbarium I failed to place, but when Dr. Harms's description and excellent illustration were published in 1933, I immediately recalled the specimen that I had been unable to name.

The Honduras collection is clearly of the same species, and bears fruits, which were not available to Radlkofer and Harms. These in appearance remind one at once of those of witch hazel (*Hamamelis*). They are very hard and woody, blackish and somewhat roughened on the outer surface, which is densely stellate-tomentose, nearly 1.5 cm.; no seeds are present on the evidently old capsules with the specimen. A remarkable character much in evidence in the Honduran material but not mentioned in the original description is the fact that some but not all the leaves are conspicuously peltate at the base, the blade being extended for about 2 mm. below the insertion of the petiole. Paul C. Standley.

LIQUIDAMBAR L.

Liquidambar Styraciflua L. A tree about 6 meters tall and 15–20 cm. in diameter (some specimens seen were much larger). Near El Achote.

ROSACEAE

PHOTINIA Lindl.

Photinia microcarpa Standl. A tree about 4.5 meters tall and 8–10 cm. in diameter; fruit red. In a wet ravine near El Achote. The tree occurs also in the mountains of British Honduras.

RUBUS L.

Rubus adenotrichos Schlecht. A shrub about 2 meters tall. Edge of a ravine near El Achote.

Rubus miser Liebm. A shrub about 2.5 meters tall; flowers pink or white. In a thicket near margin of forest at the summit of the range above El Achote.

CONNARACEAE

CONNARUS L.

Connarus Lambertii (DC.) Britton. A shrub about 2.5 meters tall; pods red. In a marsh west of Tela.

KRAMERIACEAE

Krameria cuspidata Presl. A shrub about 1 meter high; flowers light maroon. On a rocky hillside.

LEGUMINOSAE

ACACIA Willd.

Acacia Farnesiana (L.) Willd. A small tree about 3 meters tall; flowers yellow. Alluvial soil, river bottoms.

Acacia Milleriana Standl. A tree 5–6 meters tall and 30 cm. in diameter. Frequent on the plains.

Acacia salvadorensis (Britt. & Rose) Standl. A shrub about 1.5 meters tall; corolla greenish, becoming reddish toward the base; stamens pure white. In an open ravine, under pines, near El Achote.

CALLIANDRA Benth.

Calliandra arborea Standl., sp. nov.—Pl. XII. Arbor 4–9-metralis, trunco 5–15 cm. diam., ramulis ochraceis subteretibus solemniter elevato-lenticellatis glabris dense foliatis; stipulae parvae striatae; folia glabra 1–2 cm. longe petiolata, pinnis unijugis, foliolis 6; foliola sessilia coriacea valde obliqua, semiovata, paris terminalis 4–11 cm. longa 1.5–4 cm. lata, apicem versus longe anguste acuminata, apice ipso obtuso, basi valde obliqua semiobtusa, lucida, supra griseo-viridia, nervis prominulis, venulis manifestis vix prominulis, subtus fere concoloria, basi triplinervia, nervis 2 centralibus fere ad apicem prolongatis gracilibus prominentibus, venis prominulis laxe reticulatis; capitula axillaria solitaria dense multiflora staminibus exclusis fere 1.5 cm. diam., pedunculis 1.5–2 cm. longis glabris vel sparse villosulis; calyx tubuloso-campanulatus 1.5–2.5 mm. longus

sparse minute puberulus, dentibus brevissimis obtusis; corolla 1 cm. longa angusta glabra vel sparse minutissime puberula, lobis acutis ca. 2 mm. longis; stamina 3–3.5 cm. longa.—Honduras: In thicket near El Rincón, about 10 miles west of Siguatepeque, Dept. Comayagua, 1,400–1,500 meters, July 24, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6047* (type in Herb. Field Mus.); corolla reddish, the filaments red on the outermost half. Side of ravine near El Achote, hills above the plains of Siguatepeque, 1,350 meters, *Yuncker, Dawson & Youse 5912;* round-topped. Open mountain forest, Jacaieto, Dept. Comayagua, 600 meters, August, 1933, *J. B. Edwards 637;* flowers red and white.

Calliandra arborea is noteworthy for the large size of the plant, herbs and shrubs being much more common in the genus than trees, even small ones. It is most closely related to *C. centralis* (Britt. & Rose) Standl., also Honduran, which has smaller, very obtuse leaflets and usually a noticeable amount of pubescence on various parts of the plant. *C. centralis* (*Anneslia centralis* Britt. & Rose, N. Amer. Fl. 23: 52. 1928) is based upon *C. Thieme 5214* from Santa Bárbara, Honduras, a sheet of which is in the Herbarium of Field Museum. The original description of this species is so badly and incorrectly drawn that I suspected the type must be different from the Field Museum specimen. The type was kindly lent from the U. S. National Museum, and was found to agree exactly with the specimen in Field Museum. It is probable, therefore, that all specimens of this number in other herbaria are conspecific, although upon comparing them with Britton and Rose's description, one would be convinced that they represented a distinct species.

Calliandra centralis (Britt. & Rose) Standl. A small tree, about 4.5 meters tall. Stamens scarlet. Growing on a river bank.

Calliandra leucothrix Standl., sp. nov.—Frutex 1.5 m. altus, ramis crassiusculis teretibus fusco-brunneis dense pilis brevibus albidis patentibus hirsutis, sat dense foliatis; stipulae deciduae 4 mm. longae hispidulae; folia mediocria breviter petiolata ad 16 cm. longa, pinnis ca. 13-jugis; foliola parva ca. 25-juga crasse membranacea anguste oblonga 4–6 mm. longa 1.5 mm. lata obtusa vel acutiuscula, basi valde obliqua, 1-nervia, glabra sed ad margines dense pilis longis albis adpressis ciliata, nervis lateralibus subtus prominulis manifestis; capitula pauciflora breviter pedunculata racemum brevem terminalem efformantia, pedunculis ad 1 cm. longis subadpresso-hispidulis, bracteis ad basin capituli insertis parvis vix 2 mm. longis,

floribus crasse fere 2 mm. longe pedicellatis; calyx ca. 2 mm. longus atque 4 mm. latus remote triangulari-dentatus, extus pilis albidis adpresso-hispidulus; corolla 1 cm. longa extus dense albo-strigosa, lobis tubo aequilongis oblongo-lanceolatis acuminatis erectis; filamenta purpurea ca. 6 cm. longa.—Honduras: In pine forest near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, 1,350 meters, July 26, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6128* (type in Herb. Field Mus.).

Belonging to the group *Houstonianae* of the genus *Anneslia*, as treated by Britton and Rose in the *North American Flora*, and apparently closest to their *Anneslia pueblana*.

Calliandra Yunckeri Standl., sp. nov.—Frutex 2-metralis, ramis crassis teretibus ochraceis densiuscule lenticellatis, foliis inflorescentiisque e ramis abbreviatis crassis nascentibus; stipulae persistentes imbricatae; folia parva, petiolo 6–12 mm. longo sparse longipiloso, rhachi gracili ad 1.5 cm. longa sparse pilosa; pinnae 2–3-jugae 1.5–3.5 cm. longae, rhachi sparse pilosa, foliolis 9–16-jugis oblongis plerumque 6–7 mm. longis atque 2.5–3 mm. latis acutiusculis vel obtusis, basi valde obliquis, glabris sed dense pilis longis albis ciliatis, subtus paullo pallidioribis costa excentrica prominente, nervis lateralibus paucis prominulis irregularibus; capitula axillaria pauca ca. 2.5 cm. longe pedunculata dense subpauciflora; calyx tubuloso-campanulatus fere 3 mm. longus dentibus brevissimis pilosulis exceptis glaber; corolla 6 mm. longa lobis brevibus late ovato-triangularibus sparse minute puberulis exceptis glabra; stamina ca. 3 cm. longa.—Honduras: In thicket, plain near Siguatepeque, Dept. Comayagua, 1,050 meters, July 4, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5622* (type in Herb. Field Mus.).

CALOPOGONIUM Desv.

Calopogonium coeruleum Benth. A woody vine; flowers purple. River bank.

CANAVALIA HBK.

Canavalia villosa Benth. A herbaceous vine with showy, blue-lavender flowers. Thicket near El Achote.

CASSIA L.

Cassia laevigata Willd. A shrub about 2 meters tall; flowers yellow. Ravine near El Achote.

Cassia serpens L. A low, prostrate herb with yellow flowers. In wet, rocky soil in pine forest.

Cassia spectabilis DC. A spreading, round-headed tree about 7–8 meters tall; flowers yellow. River bank.

COLOGANIA Kunth

Cologania procumbens Humb. & Bonpl. Flowers blue. In wet soil, pine forest.

DALBERGIA L. f.

Dalbergia cubilquitzensis (D. Sm.) Pittier. A tree about 6 meters tall. In forest near the summit of the range above El Achote.

DESMODIUM Desv.

Desmodium axillare (Sw.) DC. Corolla red; a weed, in open places about Lancetilla valley.

Desmodium cajanifolium (HBK.) DC. Flowers lavender. River bank.

Desmodium frutescens (Aubl.) Schindl. Plants 30–60 cm. tall, becoming woody below; flowers lavender. In wet soil, pine forest.

Desmodium luteolum Standl., sp. nov.—Pl. XIII. Herba ut videtur erecta 60 cm. alta vel ultra, caule crasso tereti striato pallide viridi densissime pilis longis patentibus laxis albidis vel fulvis piloso, internodiis brevibus; stipulae longius persistentes ca. 12 mm. longae e basi late subcordato-ovata abrupte anguste caudatae brunneae striatae densissime pilosae; folia modica longipetiolata, petiolo gracili 6–7.5 cm. longo dense patenti-piloso, rhachi ca. 1.5 cm. longa, stipellis lineari-filiformibus ca. 5 mm. longis attenuatis, petiolulis crassis ca. 3 mm. longis dense pilosis; foliola 3 deltoideo-rotundata, ovato-rotundata vel fere orbicularia 4.5–6 cm. longa 4–5.5 cm. lata, apice late rotundata, basi subtruncata vel late rotundata et emarginata, crasse membranacea, supra in sicco luteo-viridia dense pilis laxis subadpressis albidis longipilosa et papillosa, subtus paullo pallidiora ubique similiter sed densius pilosa, nervis venisque prominentibus teneris, venis subarcte reticulatis; racemi simplices longipedunulati subdense multiflori ca. 30 cm. longi densissime viscido-pilosi, bracteis caducis, pedicellis gracilibus inaequalibus usque 18 mm. longis adscendentibus dense viscido-pilosis; calyx ca. 8 mm. longus sparse longipilosus profunde lobatus, lobis lanceolatis longe subulato-attenuatis; corolla ca. 11 mm. longa, petalis glabris; legu-

men non visum.—Honduras: On rocky hillsides above Siguatepeque, Dept. Comayagua, 1,200 meters, July 11, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5793* (type in Herb. Field Mus.).

"Flowers greenish yellow."

DIALIUM L.

Dialium guianense (Aubl.) Steud. A tree 7.5 meters tall. In wet soil at Puerto Arturo, 12 km. west of Tela.

ERIOSEMA Desv.

Eriosema diffusum (HBK.) Don. Flowers pinkish yellow. On a rocky hillside in pine forest.

ERYTHRINA L.

Erythrina rubrinervia HBK. A tree 6–8 meters tall; flowers scarlet. Rather frequent along river banks.

GLIRICIDIA HBK.

Gliricidia meistophylla (Donn. Sm.) Pittier. A small tree about 2 meters tall. Ravine near El Achote. The species is new to the flora of Honduras.

INDIGOFERA L.

Indigofera suffruticosa Mill. A shrub about 3 meters tall; flowers pinkish. In wet soil, waste places on plains.

INGA Scop.

Inga cobanensis Pittier. A tree about 10 meters tall; pods brown, woolly. In a wet ravine near El Achote.

MIMOSA L.

Mimosa albida Humb. & Bonpl. A shrub about 1.5 meters tall; corolla pinkish brown; stamens white or pink. In a ravine in pine forest near El Achote.

Mimosa pigra L. A shrub about 2.5 meters tall. In a marsh.

Mimosa pudica L. Flowers pink. Abundant in old meadows and waste areas.

PARKINSONIA L.

Parkinsonia aculeata L. A tree about 6 meters tall. Planted near Siguatepeque.

PAROSELA Cav.

Parosela sericea (Lag.) Rose. In open pine forest above El Achote.

PHASEOLUS L.

Phaseolus anisotrichus Scheele. Flowers orange. Rocky hillside.

PISCIDIA L.

Piscidia grandifolia (Donn. Sm.) I. M. Johnston. A tree about 6 meters tall. Rather frequent along river banks.

PITHECOLOBIUM Mart.

Pithecolobium arboreum (L.) Urban. A small tree about 3.5 meters tall. In forest near the summit of the range above El Achote.

RHYNCHOSIA Lour.

Rhynchosia pinetorum Standl., sp. nov.—Herbacea scandens, caule gracillimo subtereti pilis patentibus viscidis lutescentibus piloso, internodiis plerumque foliis longioribus; stipulae persistentes lineari-oblongae acutae costatae ca. 4 mm. longae breviter pilosae; folia parva 6–13 mm. longe petiolata, petiolo gracili viscido-piloso, rhachi ad 6 mm. longa; foliola 3 triangularia vel ovato-deltoidea 1.5–2.5 cm. longa 1–1.5 cm. lata sensim attenuato-acuminata, basi late rotundata, crasse membranacea, supra in sicco viridia papillosa et dense molliter pilosa, subtus fere concoloria, minute glanduloso-punctata, dense molliter pilosa, nervis conspicuis elevatis; racemi axillares laxe 3–6-flori ad 3.5 cm. longe pedunculati, rhachi dense viscido-pilosa, bracteis brunnescentibus tenuibus caducis ovato-oblongis, floribus remotis, pedicellis ca. 2 mm. longis; calyx viscido-pilosus 5–6 mm. longus, tubo late campanulato basi obtuso vel rotundato, lobis tubo paullo longioribus, lobo infimo aliis longiore, omnibus lineari-lanceolatis longiattenuatis enerviis; corolla 8 mm. longa, vexillo extus apicem versus breviter piloso; legumen immaturum oblongum 17 mm. longum 5 mm. latum sessile dense pilis longis et brevibus intermixtis plus minusve viscidis pilosum, apice obtusum vel subrotundatum et subito in stylum ad 9 mm. longum contractum; semina 2.—Honduras: On rocky hillside above Siguatepeque, Dept. Comayagua, 1,200 meters, July 11, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5791* (type in Herb. Field Mus.).

VIGNA Savi

Vigna repens (L.) Kuntze. A trailing vine with yellow flowers. Subalpine bog near El Achote.

ZORNIA Gmel.

Zornia diphylla (L.) Pers. A low, prostrate herb with yellowish flowers. In wet areas.

OXALIDACEAE

OXALIS L.

Oxalis latifolia HBK. Flowers lavender or violet. Common in the pine forest belt above the plains.

Oxalis Neaei DC. Flowers yellow. River bank.

RUTACEAE

ZANTHOXYLUM L.

Zanthoxylum limoniodorum Standl., sp. nov.—Frutex ut dicitur scandens, fere omnino ut videtur glaber, ramulis crassis teretibus fuscescentibus atque rimosis, internodiis plus minusve elongatis, sparse aculeis recurvis basi latis vix 4 mm. longis armatis; folia breviter petiolata ca. 13 cm. longa, rhachi supra canaliculata exalata ut petiolo aculeis numerosis recurvis brunneis ca. 3 mm. longis armata; foliola ca. 19 sessilia vel brevissime petiolulata oblongo-ovalia vel terminale ovato-ovale, 2–3.5 cm. longa 1–1.6 cm. lata, apice obtusa vel rotundata et breviter retusa, basi obtusa vel rotundata, coriacea, fere ad basin grosse glanduloso-crenata, supra in sicco olivacea sublucida, costa impressa, nervis obsoletis, subtus lutescentia vel brunnescentia, costa gracili elevata interdum prope basin aculeolata, nervis lateralibus obscuris; inflorescentia ut videtur axillaris pyramidali-paniculata folio brevior multiflora, ramis puberulis, floribus breviter crasse pedicellatis; folliculus ut videtur 1 tantum globosus sessilis basi et apice rotundatus ca. 5 mm. diam.—Honduras: Climbing in trees in a ravine near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, 1,350 meters, July 19, 1936, *T.G. Yuncker, R.F. Dawson & H. R. Youse 5974* (type in Herb. Field Mus.).

"Fruit with a strong lemon odor." Noteworthy for the small, blunt, coriaceous, coarsely crenate leaflets, and for the abundant prickles of the leaves. The material is in such advanced fruiting condition that the flower details can not be determined.

Zanthoxylum microcarpum Griseb. A small tree, about 4.5 meters tall and 8–10 cm. in diameter, flowers greenish white. River bank.

SIMARUBACEAE

PICRAMNIA Sw.

Picramnia andicola Tulasne. A tree about 4.5 meters tall and 5–8 cm. in diameter. In a wet ravine near El Achote. A species new for Honduras.

Picramnia locuples Standl., sp. nov.—Frutex vel arbuscula 2–4.5 m. alta, trunco ad 5 cm. diam., ramulis gracilibus teretibus brunnescentibus dense pilis brevibus sordidis patentibus vel adscendentibus pilosis, internodiis plerumque elongatis; folia breviter petiolata 7–16 cm. longa, rhachi gracili dense pilosula; foliola ca. 19 parva membranacea oblique ovata ad lanceolato-oblonga 1.5–3.5 cm. longa 8–12 mm. lata obtusa ad acuminata, apice ipso obtuso, basi oblique rotundata vel obtusa, supra in sicco fusco-viridia ad costam pilosula aliter glabra, nervis obsoletis, subtus paullo pallidiora tantum ad costam gracilem prominentem incurvo-pilosula, ciliata, nervis prominulis paucis; inflorescentia feminea racemosa simplex graciliter longipedunculata, racemis laxe multifloris ad 8 cm. longis, rhachi dense breviter pilosa, pedicellis patentibus plerumque 8–10 mm. longis glabris; sepala decidua; fructus immaturus obovoideus glaber apice rotundatus 4 mm. longus.—Honduras: In forest near the summit of the ridge above El Achote, above the plains of Siguatepeque, Dept. Comayagua, 1,800 meters, July 21, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6006* (type in Herb. Field Mus.). In wet ravine near El Rincón, about 10 miles west of Siguatepeque, 1,400 meters, *Yuncker, Dawson & Youse 6063*.

Fruit bright red. Well marked among Central American species of *Picramnia* by the small and usually numerous leaflets.

MELIACEAE

MELIA L.

Melia Azedarach L. A small tree about 3 meters tall and 7–8 cm. in diameter. Naturalized on a river bank.

TRICHILIA L.

Trichilia havanensis Jacq. A tree 7–8 meters tall and 45 cm. in diameter. Frequent. River bank.

MALPIGHIACEAE

BUNCHOSIA Rich.

Bunchosia pilosa HBK. A shrub about 2 meters tall; corolla yellow. Bottom of a wet ravine near El Rincón; also near El Achote.

BYRSONIMA Rich.

Byrsonima crassifolia (L.) DC. A small tree about 3 meters tall and 7–8 cm. in diameter; flowers orange. On a rocky hillside in pine forest belt; also on sand dunes near the beach west of Tela.

MALPIGHIA L.

Malpighia glabra L. A tree 7.5–9 meters tall and 10–12 cm. in diameter; petals pink. In wet ravine near El Achote.

STIGMAPHYLLON Juss.

Stigmaphyllon ellipticum (HBK.) Juss. A woody vine, climbing over shrubs in a thicket. River bank.

Stigmaphyllon puberum Juss. A woody vine; corolla yellow and orange. Climbing in a thicket between Tela and Lancetilla Valley.

POLYGALACEAE

POLYGALA L.

Polygala glochidiata HBK. Flowers white. River bank.

Polygala incarnata L. Corolla purplish. In pine forest.

Polygala longicaulis HBK. Flowers pink. In an old, wet pasture.

DICHAPETALACEAE

DICHAPETALUM Thouars

Dichapetalum Donnell-Smithii Engler. A shrub or small tree 4.5 meters tall. In a thicket near the beach west of Tela.

EUPHORBIACEAE

ACALYPHA L.

Acalypha alopecuroides Jacq. A weedy plant in waste places.

Acalypha leptopoda Muell. Arg. A small, slender tree about 3–4 meters tall. Thicket. River bank.

Acalypha macrostachya Jacq. A tree about 3.5 meters tall and 2.5–5 cm. in diameter. On a ridge about 6 km. north of Siguatepeque.

Acalypha porphyrantha Standl. A shrub 0.5–1 meter tall. River bank.

CROTON L.

Croton ciliato-glandulosus Ortega. A shrub about 1 meter tall; flowers white. River bank.

Croton repens Schlecht. A shrub about 50–60 cm. tall or less; flowers white. Frequent in thickets.

EUPHORBIA L.

Euphorbia graminea Jacq. A weedy herb. River bank.

JATROPHA L.

Jatropha Curcas L. A small tree about 3 meters tall and 15 cm. in diameter. River bank.

ANACARDIACEAE

RHUS L.

Rhus terebinthifolia Schl. & Cham. A tree about 3.5 meters tall and 5 cm. in diameter. In a wet ravine near El Achote.

AQUIFOLIACEAE

ILEX L.

Ilex hondurensis Standl., sp. nov.—Pl. XIV. Arbor 4.5–7.5 m. alta, trunco 7.5–20 cm. diam., omnino glabra, ramulis subteretibus fuscescentibus lenticellatis rimosis, novellis subangulatis fuscis, internodiis brevibus; folia modica breviter petiolata rigide coriacea, petiolo crasso 2–4 mm. longo; lamina elliptica, ovalis vel rotundato-ovalis 5–6.5 cm. longa 3–4.5 cm. lata, apice late rotundata vel obtusa, basi rotundata vel obtusa, ubique supra basin remote obscure adpresso-crenata, interdum fere integra, supra in sicco sublucida, costa prominente, nervis obscuris non elevatis, subtus fere concolor, costa crassiuscula prominula, nervis lateralibus utroque latere ca. 6 angulo lato adscendentibus fere rectis vix prominulis remote a margine irregulariter arcuato-junctis, venulis fere obsoletis; flores feminei axillares fasciculati pauci (ca. 3 in axilla), pedicellis gracilibus ca. 4 mm. longis; calyx subadpressus 2 mm. latus brevissime obscure 5-lobus; fructus immaturus globosus 2.5 mm. longus stigmate magno terminatus.—Honduras: Edge of ravine near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, August 3, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6293* (type in Herb. Field Mus.). In forest near the summit of the ridge above El Achote, 1,800 meters, July 28, 1936, *Yuncker, Dawson & Youse 6179*. Near El Achote, 1,350 meters, *Yuncker, Dawson & Youse 5838*.

Related to the Mexican *I. tolucana* Hemsl., in which the leaves are acute at the base and merely obtuse at the apex.

CELASTRACEAE

RHACOMA L.

Rhacoma eucymosa (Loes. & Pitt.) Standl. A shrub. In dense forest, hills above Lancetilla Valley.

STAPHYLEACEAE

TURPINIA Vent.

Turpinia paniculata Vent. A tree about 7.5 meters tall and 10–12 cm. in diameter. Ravine near El Achote.

SAPINDACEAE

CARDIOSPERMUM L.

Cardiospermum microcarpum HBK. A vine climbing in a thicket. River bank.

VITACEAE

CISSUS L.

Cissus cacuminis Standl., sp. nov.—Frutex scandens, ramis crassis subteretibus ferrugineis lenticellis magnis elevatis notatis glabris vel sparse pilosis rimosis, cortice cito exfoliante, internodiis plus minusve elongatis; folia mediocria longipetiolata in sicco membranacea et fragilia, simplicia, petiolo gracili 1.3–4.5 cm. longo sparse pilis longis laxis albidis piloso vel glabrato; lamina ovata vel late ovata 4–9.5 cm. longa 3–5 cm. lata sensim acuminata, basi truncata vel saepius breviter late cordata, ubique remote vel dense serrata, serraturis angustis subulato-apiculatis adpressis, supra in sicco viridis primo sparse villosa cito glabrata, costa nervisque prominentibus, subtus concolor primo sat dense pilis longis pallidis vel brunnescentibus laxis villosa cito glabrata, basi 5-nervia, costa gracili prominente supra basin nervos laterales ca. 3 emittente, venulis obviis sed non elevatis; cymae oppositifoliae graciliter pedunculatae laxe multiflorae ca. 3 cm. latae et aequilongae, ramis sat dense villosis, floribus lutescentibus parvis umbellatis, pedicellis gracilibus 2–4 mm. longis adpresso-pilosis; calyx patelliformis vix ultra 1 mm. latus undulatus; petala paullo ultra 1 mm. longa.—Honduras: Climbing in trees in wet ravine near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, 1,350 meters, August 5, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6330* (type in Herb. Field

Mus.). In forest near the summit of the range above El Achote, in cloud zone, 1,800 meters, *Yuncker, Dawson & Youse 6005*.

Although doubtless related to the common *C. sicyoides* L., the present plant is obviously different in general appearance as well as in some of the minor details, and I have no doubt that it represents a well marked species.

Cissus Martiniana Woodson & Seibert. Climbing over shrubs in forest near the summit of the range above El Achote. A recently described species, the type from Panama, occurring also in Costa Rica.

Cissus rhombifolia Vahl. Scrambling over shrubs in a wet ravine near El Rincón.

Cissus salutaris HBK. Climbing in a thicket on a rocky hillside.

VITIS L.

Vitis tiliifolia Humb. & Bonpl. A woody vine climbing over shrubs in a wet ravine near El Achote.

MALVACEAE

MALVAVISCUS Cav.

Malvaviscus arboreus Cav. A shrub about 3.5 meters tall; corolla scarlet. In a wet ravine near the summit of the range above El Achote.

SIDA L.

Sida ciliaris L. A low shrub; flowers salmon. On plains.

Sida linifolia Juss. A low, half-woody shrub. In a thicket.

ACTINIDIACEAE

SAURAUIA Willd.

Saurauia leucocarpa Schlecht. A small tree about 4.5 meters tall and 5 cm. in diameter; fruit succulent, with scattered, small, brown seeds in a viscid pulp. In forest near the summit of the range above El Achote. An addition to the known trees of Honduras.

Saurauia villosa DC. A tree 6–7 meters tall and 15 cm. in diameter; flowers white, fragrant. In forest near the summit of the range above El Achote.

OCHNACEAE

SAUVAGESIA L.

Sauvagesia tenella Lam. An herb; flowers pink, delicate. In a wet pasture.

MARCGRAVIACEAE

MARCGRAVIA L.

Marcgravia rectiflora Triana & Planch.? Climbing on a tree on stream bank, bottom of a ravine near El Achote.

SOUROUBEA Aubl.

Souroubea guianensis Aubl. A woody vine; flowers and pedicels orange or reddish. In a ravine near El Achote; also on a tree near the shore of Lake Yojoa.

THEACEAE

EURYA Thunb.

Eurya guatemalensis Donn. Sm. A small tree about 4.5 meters tall and 8 cm. in diameter; flowers white, fleshy. In forest near the summit of the range above El Achote. The species is new to the Honduran flora.

TERNSTROEMIA L. f.

Ternstroemia Tepezapote Cham. & Schl. A tree 6–7 meters tall and 15–20 cm. in diameter; leaves leathery, dark green, shiny. River bank.

GUTTIFERAE

CLUSIA L.

Clusia Salvinii Donn. Sm. A tree 7–8 meters tall and 30 cm. in diameter. The fruit opens in a characteristically stellate form. In a wet ravine near El Achote.

HYPERICUM L.

Hypericum uliginosum HBK. Flowers orange-yellow. In a subalpine bog near El Achote.

VISMIA Vand.

Vismia guianensis (Aubl.) Pers. A tree about 9 meters tall and 15 cm. in diameter. In pine-oak association, El Achote. Not recorded previously for Honduras.

VIOLACEAE

HYBANTHUS Jacq.

Hybanthus oppositifolius (L.) Taub. An herb with somewhat purplish flowers. River bank.

FLACOURTIACEAE

OLMEDIELLA Baill.

Olmediella Betschleriana (Goepp.) Loes. A shrub or small tree about 3.5 meters tall. In thicket near El Achote. For notes regarding this interesting plant see Trop. Woods 32: 17. 1932.

XYLOSMA Forst.

Xylosma Hemsleyana Standl. A shrub about 1 meter tall. In a dry ravine east of Siguatepeque.

PASSIFLORACEAE

PASSIFLORA L.

Passiflora ciliata Dryander. Climbing over shrubs in a thicket, edge of forest, Lancetilla Valley.

Passiflora foetida L. var. **gossypiifolia** (Desv.) Mast. Climbing in a thicket, river bank.

BEGONIACEAE

BEGONIA L.

Begonia tovarensis Klotzsch. Petals pale pink; stems light red. Subalpine bog near El Achote; also in forest, Lake Yojoa.

Begonia Yunckeri Standl., sp. nov.—Pl. XV. Herba ut videtur erecta caulescens ramosa gracilis, ramis sparse pilis longis laxis villosis vel fere glabris, internodiis elongatis; stipulae hyalinae caducae ad 1.5 cm. longae albidae nervosae apice obtusae vel rotundatae glabrae; folia modica longissime petiolata in sicco membranacea, petiolo gracillimo 2.5–8.5 cm. longo sparse laxe villoso vel fere glabro; lamina ambitu oblongo-ovata vel lanceolato-oblonga 6–13 cm. longa 2–5.5 cm. lata, petiolo lateraliter inserto, longissime anguste attenuato-acuminata, basi insigniter obliqua, altero latere semiobtusa, lobo postico late rotundato vel angulato, plus minusve breviter lobata, in toto margine inaequaliter dentata, dentibus breviter vel longe mucronatis et interdum villoso-ciliatis, supra in sicco viridis sublucida sparse pilis brevibus patentibus pallidis villosa vel glabrata, subtus ad nervos dense villosa, aliter glabra, basi vulgo

7-nervia; flores monoeci in umbellas axillares 3–4-floras longe graciliter pedunculatas dispositi, pedicellis gracillimis ad 8 mm. vel in statu fructifero ad 15 mm. longis sparse breviter villosulis vel glanduloso-pilosulis; sepala exteriora floris masculi ovato-rotundata 6 mm. longa et fere aequilata alba glabra apice rotundata basi subcordata; capsula (perfecta non visa) 6 mm. longa atque 4 mm. lata basi obtusa, angulis angustissime alatis, alis vix 1 mm. longis vel obsoletis.—Honduras: On forest floor, forest near the summit of the range above El Achote, in cloud zone, above the plains of Siguatepeque, Dept. Comayagua, 1,800 meters, July 28, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6148* (type in Herb. Field Mus.).

"Corolla white. Stems up to 1 cm. in diameter."

CACTACEAE

CEREUS L.

Cereus hondurensis Schum. Forming large patches on rocks near the shore about 8 km. east of Tela.

EPIPHYLLUM Haw.

Epiphyllum caudatum (Vaupel) Britt. & Rose. On a tree at edge of clearing in Lancetilla Valley.

Epiphyllum strictum (Lem.) Britt. & Rose? On a tree near shore of Lake Yojoa; flowers white, 5–8 cm. long. Also on fallen log in a deep, moist ravine near El Rincón.

RHIPSALIS Gaertn.

Rhipsalis Cassutha Gaertn. Forming large clumps on a tree near the shore of Lake Yojoa. Corolla white, fruit pinkish.

LYTHRACEAE

CUPHEA Adans.

Cuphea carthagenensis (Jacq.) Macbr. An herb; flowers magenta. In a wet meadow.

Cuphea Hookeriana Walp. A low shrub less than 1 meter tall; flowers white to purple, attractive. In a ravine near El Achote.

Cuphea utriculosa Koehne. A low, sprawling shrub about 30–50 cm. tall; flowers violet. Frequent in mud along river bank.

MYRTACEAE

CALYPTRANTHES Sw.

Calyptranthes hondurensis Standl. A small tree or shrub up

to 3–4 meters tall. In a thicket near El Achote. The species is known only from this region.

EUGENIA L.

Eugenia apodantha Standl., sp. nov.—Arbuscula 4.5 m. alta, trunco 7 cm. diam., ut videtur dense ramosa, ramulis crassiusculis teretibus ochraceis rimosis, cortice exfoliante, novellis angulatis brunnescentibus dense pilosis, internodiis brevibus; folia modica fere sessilia coriacea, petiolo crasso ca. 2 mm. longo piloso; lamina oblonga vel elliptico-oblonga 7–9 cm. longa 3–3.5 cm. lata acuta, apice ipso obtuso, basi anguste rotundata vel obtusa, supra in sicco griseo-viridis dense minute puncticulata, sparse vel subdense pilis longiusculis laxis pilosa vel glabrata, costa impressa, nervis obsoletis, subtus paullo pallidior densiuscule pilis lutescentibus sublucidis pilosa, costa gracillima prominente, nervis lateralibus utroque latere ca. 10 tenerrimis obscuris vix prominulis fere rectis angulo latiusculo divergentibus prope marginem in nervum collectivum fere regularem conjunctis, venis obsoletis; flores axillares solitarii sessiles; fructus immaturus semiglobosus ca. 4 mm. longus et 5 mm. latus basi rotundatus densissime pilis brevibus patentibus ochraceis pilosus; sepala persistentia 4 oblongo-ovata obtusa 4–5 mm. longa patentia utrinque dense breviter pilosa; stylus gracilis glaber 8 mm. longus.—River bank, plain near Siguatepeque, Dept. Comayagua, 1,050 meters, July 9, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5766* (type in Herb. Field Mus.). Also referable here is a sterile specimen: Thicket along river bank near Siguatepeque, a tree of 4.5 meters, February, 1928, *Standley 56057*. It is not improbable that both collections are from the same individual.

The crushed leaves are said to be aromatic. Because of its solitary, quite sessile flowers this can scarcely be confused with any other species of *Eugenia* found in Central America.

Eugenia axillaris (Sw.) DC. A tree 3.5–4.5 meters tall and 10 cm. in diameter; flowers white. River bank.

Eugenia Doubledayi Standl. A small tree about 6 meters tall and 8–10 cm. in diameter; flowers white. River bank. The species is known only from the region of Siguatepeque.

Eugenia vincentina Krug & Urban. A small tree 4–5 meters tall and 15 cm. in diameter. River bank.

Eugenia Yunckeri Standl., sp. nov.—Frutex 2.5 m. altus, ramulis gracilibus teretibus brunnescentibus vel fuscis, novellis

ferrugineis densissime velutine patenti-pilosis, internodiis brevibus vel elongatis; folia modica elliptico-oblonga vel elliptica 7–14 cm. longa 3–7 cm. lata sensim vel subabrupte acuminata vel acuta, apice ipso obtuso, interdum apice fere obtusa et tantum obtuse apicata, basi acutisuscula vel obtusa, plus minusve lucida, sparse molliter pilosa, serius glabrata, nervis venisque non elevatis, subtus paullo pallidior, ubique sat dense pilis patentibus pallidis velutino-pilosa, costa gracili elevata, nervis lateralibus utroque latere ca. 9 angulo latiusculo adscendentibus rectis vel paullo arcuatis remote a margine irregulariter arcuato-conjunctis, venis vix obviis, ubique dense subgrosse punctata, margine interdum anguste incurvo; flores in axillis fasciculati pauci fere sessiles, pedicellis vix ad 2 mm. longis crassis pilosis; hypanthium hemisphaericum ca. 3 mm. latum dense molliter pilosum; sepala 4 rotundata 2.5–3 mm. longa apice late rotundata ciliata, extus breviter patenti-pilosa, intus dense breviter sericea.—Honduras: In thicket near trail west of El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, 1,300 meters, July 28, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6178* (type in Herb. Field Mus.). Also (sterile material), El Achote, open mountain forest, a tree 12 meters high, October, 1932, *J. B. Edwards 499*.

Similar to *E. Banghamii* Standl., a frequent species of the Panama Canal Zone.

PSIDIUM L.

Psidium Guajava L. A shrub about 3 meters tall; flowers white. On a rocky hillside.

Psidium molle Bertol. A shrub 2–3 meters tall; flowers white. River bank.

Psidium Oerstedeanum Berg. A low shrub with white flowers. On a rocky hillside.

MELASTOMACEAE

ARTHROSTEMMA Ruiz & Pavón

Arthrostemma fragile Lindl. Corolla pink. Side of a ravine near El Achote.

BLAKEA L.

Blakea aeruginosa Standl., sp. nov.—Arbor 7.5–9 m. alta, trunco 12–15 cm. diam., ramulis crassis obtuse angulatis densissime pilis rufis setoso-pilosis vel fere tomentosis, internodiis valde abbreviatis; folia majuscula longipetiolata coriacea, petiolo crassiusculo usque 4.5 cm. longo supra anguste canaliculato densissime ferru-

gineo-setuloso; lamina elliptico-oblonga 11–16 cm. longa 5–8 cm. lata abrupte breviter caudato-acuminata, acumine obtuso vix ultra 8 mm. longo, basi anguste rotundata, fere integra, supra in sicco griseo-viridis glabra lucida, nervis solemniter impressis, subtus primo sat dense breviter ferrugineo-setulosa vel serius glabrata, triplinervia vel quintuplinervia (nervis exterioribus multo tenerioribus et marginibus saepe recurvis fere occultis), nervis 3 mediis crassis elevatis apice junctis, nervis lateralibus numerosis approximatis rectis angulo paullo minore quam recto divergentibus prominulis; flores axillares solitarii, pedunculo crasso dense ferrugineo-setuloso 1.5–2 cm. longo; bracteae 4 fere distinctae lanceolatae vel anguste lanceolatae, exteriores ca. 2 cm. longae longissime attenuatae, extus densissime pilis ferrugineis hispidulis setulosae, intus fere glabrae sed apicem versus stellato-puberulae; calycis tubus hemisphaericus ca. 8 mm. longus et aequilatus fere glaber, limbo (lobis inclusis) usque 14 mm. longo extus ferrugineo-setuloso, lobis lanceolato-oblongis ca. 8 mm. longis obtusis vel acutiusculis.—Honduras: In forest near the summit of the ridge above El Achote, in cloud zone, above the plains of Siguatepeque, Dept. Comayagua, 1,850 meters, August 1, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6267* (type in Herb. Field Mus.).

The corolla, which I have not seen, is described as pink. Among Central American species this is conspicuous because of the abundant, rusty pubescence found on almost all parts of the plant.

CENTRADENIA G. Don

Centradenia Bernoullii Cario. A shrub 60–75 cm. tall. On rocks in a ravine near El Achote.

CLIDEMIA D. Don

Clidemia dentata Don. A shrub about 3 meters tall, spreading. In forest near the summit of the range above El Achote.

Clidemia hirta (L.) Don. A shrub nearly 2 meters tall; flowers white. River bank.

Clidemia rubra (Aubl.) Mart. A shrub about 1 meter tall. Thicket.

CONOSTEGIA D. Don

Conostegia subhirsuta DC. A tree 7–8 meters tall and 7–10 cm. in diameter; flowers white, aromatic. Side of a ravine near El Achote.

Conostegia xalapensis (Bonpl.) Don. A shrub 2–3 meters tall; flowers pinkish; fruit smooth, dark purple. Common on the plains and in the pine forest.

MICONIA Ruiz & Pavón

Miconia albicans Triana. A shrub 1–2 meters tall; fruit red. Common in thickets on the plains and in the pine belt.

Miconia globulifera Naud. A small tree about 3 meters tall and 3–5 cm. in diameter. Bottom of a ravine near El Achote. New for the flora of Honduras.

Miconia humilis Cogn. A shrub about 2 meters tall. Rim of a ravine near El Achote.

Miconia longifolia DC. A small tree 4.5–6 meters tall and 5–8 cm. in diameter; fruit purplish. In a thicket in a wet ravine near El Rincón. Not recorded previously for the flora of Honduras.

Miconia Schlechtendalii Cogn. A low shrub 0.5–1 meter tall. Thicket.

TIBOUCHINA Aubl.

Tibouchina longifolia (Vahl) Baill. A shrub 60–90 cm. tall; petals white. In pine forest near El Achote.

ONAGRACEAE

JUSSIAEA L.

Jussiaea linifolia Vahl. In a marsh.

Jussiaea peruviana L. A small tree 3.5–4 meters tall. In a bog near El Achote.

Jussiaea repens L. In a marsh.

Jussiaea suffruticosa L. A weedy plant, common in moist, waste places.

ARALIACEAE

ARALIA L.

Aralia humilis Cav. A shrub about 2 meters tall. On a rocky hillside. The species is new for Honduras.

GILIBERTIA Ruiz & Pavón

Gilibertia leptopoda Donn. Sm. A tree about 6 meters tall and 8–10 cm. in diameter. In a wet ravine near El Achote. Not reported previously from Honduras.

OREOPANAX Dcne. & Planch.

Oreopanax Liebmannii March. A tree about 15 meters tall and 60 cm. in diameter. In dense forest near the summit of the range above El Achote. The tree is new for the Honduran flora.

Oreopanax peltatum Linden. A small tree about 4.5 meters tall. Ravine near El Achote. Reported previously from the same region under the name *O. Salvinii* Hemsl.

Oreopanax xalapense (HBK.) Dcne. & Planch. A tree about 3.5 meters tall and 5 cm. in diameter. In forest near the summit of the range above El Achote. An addition to the known trees of Honduras.

UMBELLIFERAE

ERYNGIUM L.

Eryngium caricinum Standl. In an old, wet pasture. The species is known only from Siguatepeque.

HYDROCOTYLE L.

Hydrocotyle umbellata L. Corolla greenish white. In a subalpine bog near El Achote; also in a low, wet area about 12 km. west of Tela.

SPANANTHE Jacq.

Spananthe paniculata Jacq. Corolla yellow. River bank, about 6 km. north of Siguatepeque.

CLETHRACEAE

CLETHRA L.

Clethra hondurensis Britton. A tree about 6 meters tall and 10 cm. in diameter; flowers greenish white. Rocky hillside.

PYROLACEAE

CHIMAPHILA Pursh

Chimaphila dasystemma Torr. Flowers white with green pistils, attractive. In partial shade, hillside near El Achote. This species and the following one are new to the flora of Honduras.

MONOTROPA L.

Monotropa coccinea Zucc. Entire plant bright red. In humus of forest floor near the summit of the range above El Achote.

ERICACEAE

ARBUTUS Adans.

Arbutus xalapensis HBK. A tree about 4.5 meters tall and 5–8 cm. in diameter; stems and petioles red. In pine forest near El Achote.

BEFARIA Mutis

Befaria mexicana Benth. A small tree about 4.5 meters tall and 5–7 cm. in diameter; inflorescence viscid; flowers white, fragrant. In a ravine near El Achote. An addition to the known trees of the country.

SPHYROSPERMUM Poepp. & Endl.

Sphyrospermum majus Griseb. Fruit light purple, fleshy. Climbing on a tree in forest near the summit of the range above El Achote. The species is new for Honduras.

THIBAUDIA Ruiz & Pavón

Thibaudia costaricensis Hoer. A tree 15–18 meters tall and about 60 cm. in diameter; fruit purplish black. In dense forest at the summit of the range above El Achote.

MYRSINACEAE

ARDISIA Sw.

Ardisia compressa HBK. A small tree about 4.5 meters tall and 8 cm. in diameter; flowers white; fruit black. Side of a ravine near El Achote.

PARATHESIS Hook. f.

Parathesis Donnell-Smithii Mez. A small tree about 4.5 meters tall and 10–12 cm. in diameter; flowers, pedicels, etc. flesh-colored. Side of a ravine near El Achote. New for the Honduran flora.

SAPOTACEAE

CALOCARPUM Pierre

Calocarpum mammosum (L.) Pierre. A tree about 15 meters tall and 60 cm. in diameter. River bank.

CHRYSOPHYLLUM L.

Chrysophyllum oliviforme L. A small tree 7–8 meters tall and 45 cm. in diameter; leaves bright green above, brown-silky beneath. River bank.

STYRACACEAE

STYRAX L.

Styrax argenteus Presl. A tree 9–10 meters tall and 50 cm. in diameter; flowers waxy-white with yellow stamens. River bank.

Styrax glabrescens Benth. A tree 6–7.5 meters tall and 12–15 cm. in diameter; fruit with a hard seed and thin pericarp. In forest near the summit of the range above El Achote. The species is new for Honduras.

OLEACEAE

FRAXINUS L.

Fraxinus hondurensis Standl., sp. nov.—Arbor 18-metralis, trunco 60 cm. diam., corona depressa lata, ramulis teretibus crassiusculis lenticellis paucis pallidis parvis conspersis, novellis dense minute patenti-pilosulis; folia modica graciliter 4–5.5 cm. longe petiolata, petiolo exalato minute pilosulo, rhachi gracili exalata vel obscure marginata minute pilosula usque 7 cm. longa; foliola 5, lateralia sessilia, vel inferiora petiolulata, terminale longe graciliter petiolulatum, lanceolata vel oblongo-lanceolata 4.5–12.5 cm. longa et ultra 1.5–4.5 cm. lata, plerumque longissime angustissime attenuato-acuminata, terminali basi longiacuminato vel acuminato, lateralibus basi saepe valide obliquis et acutis vel acuminatis, in sicco laete viridia, supra lucida, sparse minute puberula, costa ut nervis venisque prominulis, subtus fere concoloria, subsparse breviter patenti-pilosula, costa gracili elevata, nervis lateralibus utroque latere ca. 9 angulo acuto adscendentibus, venulis prominulis arcte reticulatis, foliolis remote inaequaliter serrulatis vel fere integris.—Honduras: In grove near river bank, plains near Siguatepeque, Dept. Comayagua, 1,050 meters, July 23, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6038* (type in Herb. Field Mus.).

"Bark furrowed. A fine, spreading tree." The genus is new to Honduras and probably to Central America, this being the southernmost occurrence known for it at the present time in America. The material is, unfortunately, sterile, but in leaf characters it appears to be so definitely different from any of the Mexican species that I do not hesitate to describe it as new.

LOGANIACEAE

SPIGELIA L.

Spigelia Humboldtiana Cham. & Schlecht. An herb with white flowers. In shade, river bank.

GENTIANACEAE

LEIPHAIMOS Schlecht. & Cham.

Leiphaimos parasiticus Schlecht. & Cham. A saprophytic herb, pale red below, tawny toward the top. In forest near the summit of the range above El Achote.

MENYANTHACEAE

LIMNANTHEMUM Gmel.

Limnanthemum Humboldtianum (HBK.) Griseb. Growing in water. Corolla white. Marsh near Siguatepeque.

APOCYNACEAE

MANDEVILLA Lindl.

Mandevilla tubiflora (Mart. & Gal.) Woodson. Climbing in a thicket near El Rincón. Corolla greenish yellow.

ASCLEPIADACEAE

ASCLEPIAS L.

Asclepias curassavica L. A common weed in waste places about Siguatepeque.

Asclepias guatemalensis Donn. Sm. Corolla yellowish green, horns light violet. Rocky hillside.

METASTELMA R. Br.

Metastelma pedunculare Dcne.? Sprawling over a fallen log in forest near the summit of the range above El Achote.

VINCETOXICUM Walt.

Vincetoxicum porphyranthum Standl., sp. nov.—Volubilis, gracilis, caule viridi dense minute puberulo atque pilis longis rigidis patentibus fulvis hirsuto, internodiis foliis longioribus; folia inter minora petiolata membranacea, petiolo gracili 10–17 mm. longo dense longihirsuto; lamina oblongo-ovata 3.5–6 cm. longa 1.5–2.5 cm. lata longe anguste attenuato-acuminata, basi anguste rotundata et breviter cordata, sinu lato aperto, utrinque praesertim ad nervos venasque pilis longissimis patentibus hirsuta, supra in sicco viridis, venis nervisque prominulis, subtus paullo pallidior, costa gracili prominente, nervis lateralibus utroque latere 3–4 tenerrimis angulo angusto adscendentibus, venulis inconspicuis laxe reticulatis; umbellae axillares solitariae laxe pauciflorae, pedunculo vix ultra 5 mm. longo puberulo et hirsuto, pedicellis plerumque 6–7 mm. longis dense

viscido-puberulis et sparse hirsutis, bracteis filiformibus viridibus ca. 5 mm. longis; calyx adpressus extus sparse hirsutus purpureus 5–6 mm. longus fere ad basin 5-lobus, lobis anguste lanceolato-oblongis anguste longiattenuatis; corolla in sicco fusco-purpurea 7–8 mm. longa subrotata, extus sparse puberula et hispidula, ad medium 5-loba, lobis triangulari-ovatis acutiusculis, intus sparse puberulis et sparse breviter hirsutis vel interdum fere glabris.—Honduras: Climbing in thicket near river, Siguatepeque, Dept. Comayagua, 1,050 meters, July 5, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5676* (type in Herb. Field Mus.).

Vincetoxicum trichoneuron Standl., sp. nov.—Scandens, caule gracillimo viridi subtereti puberulo et ad sulcos dense brunneo-piloso, internodiis foliis multo longioribus; folia modica petiolata membranacea, petiolo 1–2 cm. longo crassiusculo densissime brunneo-piloso; lamina oblonga 7.5–12 cm. longa 3–4 cm. lata apicem versus paullo angustata longiacuminata, basi late rotundata vel subtruncata, supra in sicco viridis, ad nervos venasque adpresso-pilosa, costa nervisque manifestis sed vix plus quam prominulis, subtus multo pallidior, molliter pilis brevibus subpatentibus brunnescentibus pilosa, ad costam densissime pilis longis brunneis rigidulis pilosa, costa gracili elevata, nervis lateralibus utroque latere ca. 6 angulo latiusculo adscendentibus irregularibus, venis manifestis conspicuis laxe reticulatis; umbellae axillares solitariae 1–3-florae, pedunculo crasso vix 5 mm. longo, pedicellis usque 1 cm. longis breviter pilosulis et sparse longipilosis; calyx viridis 7–8 mm. longus extus breviter pilosulus fere ad basin 5-lobus, lobis oblongo-lanceolatis longiacuminatis adpressis; corolla olivacea rotata fere 2 cm. lata extus minute breviter pilosula, intus glabra, ad medium 5-loba, lobis orbicularibus apice late rotundatis, intus nervis 5 longitrorsis rectis notatis et arcte reticulato-venosis.—Honduras: Twining over shrubs in pine-oak forest near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, 1,350 meters, July 30, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6211* (type in Herb. Field Mus.).

The type specimen bears a single opened corolla that unfortunately is incomplete.

CONVOLVULACEAE

CUSCUTA L.

Cuscuta strobilacea Liebm. Abundant on various herbaceous and woody hosts along river banks.

IPOMOEA L.

Ipomoea cathartica Poir. An herbaceous vine; flowers large, purplish. Climbing in a thicket. River bank.

Ipomoea digitata L. Corolla reddish. Climbing in a thicket near the beach west of Tela.

Ipomoea muricata Cav. Flowers pinkish; roots tuberous. On a rocky hillside.

Ipomoea silvicola House. Corolla purplish. Climbing in a thicket. River bank about 6 km. north of Siguatepeque.

BORAGINACEAE

HELIOTROPIUM L.

Heliotropium angiospermum Murr. Corolla white. In waste places near Potrerillos.

Heliotropium indicum L. A common weedy herb about 1 meter tall; flowers lavender. In waste places.

TOURNEFORTIA L.

Tournefortia glabra L. A shrub; fruit white. River bank about 6 km. west of Siguatepeque.

Tournefortia hirsutissima L. A scandent shrub. River bank about 5 km. northwest of Siguatepeque.

Tournefortia volubilis L. A shrub about 3 meters tall. River bank.

VERBENACEAE

CALLICARPA L.

Callicarpa acuminata HBK. A shrub about 2.5 meters tall; corolla white. In a thicket near Potrerillos.

CITHAREXYLUM L.

Citharexylum Mocinni D. Don. A shrub 1.5–2 meters high. Wet ravine near El Achote. The species is new for Honduras.

LANTANA L.

Lantana Camara L. A shrub about 3 meters tall; flowers orange. In a thicket near the shore of Lake Yojoa.

Lantana involucrata L. A shrub about 1 meter tall; flowers pink to lavender. Frequent on the plains.

LIPPIA L.

Lippia dulcis Trev. Flowers white. River bank.

Lippia Kellermanii Greenm. A tree about 6 meters tall and 7–10 cm. in diameter; corolla pale yellow. River bank about 6 km. west of Siguatepeque.

VERBENA L.

Verbena carolina L. A weedy plant in waste places.

Verbena littoralis HBK. A weedy herb about a meter tall; flowers lavender. Common in waste places.

LABIATAE

HYPTIS Jacq.

Hyptis asperifolia Standl. A shrub 1.5–2 meters tall. Side of a ravine near El Achote. The species is known only from this region.

SALVIA L.

Salvia siguatepequensis Standl. A shrub about 2 meters tall; flowers scarlet. Side of a ravine near El Achote. Known only from the region of Siguatepeque.

STACHYS L.

Stachys guatemalensis Epling. A decumbent herb with rather long stems. River bank.

SOLANACEAE

CAPSICUM L.

Capsicum macrophyllum (HBK.) Standl. A shrub or small tree about 4.5 meters tall; flowers pale yellow; berries orange. Ravine near El Achote.

CESTRUM L.

Cestrum nocturnum L. var. **mexicanum** Schulz. A shrub 1.5 meters tall. Near El Achote.

CYPHOMANDRA Sendtn.

Cyphomandra heterophylla Donn. Sm. A shrub or small tree about 3.5 meters tall. In a wet ravine near El Achote. A synonym of this is *C. mollicella* Standl.

LYCIANTHES Hassler

Lycianthes sideroxyloides (Schlecht.) Bitter. A scandent shrub. In a thicket near the summit of the range above El Achote.

MERINTHOPODIUM Donn. Sm.

Merinthopodium neuranthum (Hemsl.) Donn. Sm. Corolla green without, purplish within. A small shrub, on a tree trunk in forest near Lancetilla Valley.

PHYSALIS L.

Physalis ingrata Standl., sp. nov.—Herba perennis erecta(?) ramosa, ramis viridibus gracilibus pilis tenuibus albidis brevibus patentibus pilosis, internodiis brevibus vel elongatis; folia inter minora longipetiolata herbacea, petiolo gracili 0.8–2 cm. longo dense breviter albido-villosulo; lamina ovata vel late ovata 2–5 cm. longa 1.5–2.5 cm. lata acuta vel subacuta, rarius attenuata, basi plus minusve inaequali late rotundata ad obtusa, supra sparse breviter villosula, subtus viridis densius villosula, margine integro vel paullo undulato; flores axillares solitarii cernui (?), pedicellis fere filiformibus usque 1.5 cm. longis dense villosulis; calyx florifer 8 mm. longus campanulatus viridis dense breviter villosulus, lobis tubo aequilongis lanceolato-triangularibus attenuatis; corolla lutea ca. 12 mm. longa extus sparse puberula, fauce maculis 5 magnis atropurpureis notata; calyx fructifer anguste ovoideus basi ut videtur non depressus 1.5 cm. longus vel ultra viridis subdense breviter villosulus, lobis tubo accrescente multo brevioribus.—Honduras: On rocky hillsides above Siguatepeque, Dept. Comayagua, 1,200 meters, July 14, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5865* (type in Herb. Field Mus.). Collected also in the same region, July 11, *No. 5794*.

SARACHA Ruiz & Pavón

Saracha procumbens (Cav.) Ruiz & Pav. An herb, about 1 meter tall; flowers greenish white. River bank.

SOLANUM L.

Solanum aculeatissimum Jacq. A shrub about 1.5 meters tall; flowers greenish white. In a wet ravine near El Achote.

Solanum bicolor Mill. A shrub about 1 meter tall. In a thicket, margin of the forest at the summit of the range above El Achote.

Solanum erythrotrichum Fernald. A somewhat scandent shrub; flowers greenish white to purplish. Frequent on the plains and to the summit of the range above El Achote.

Solanum guanicense Urban? In an old pasture.

Solanum laurifolium Mill. A shrub about 1.5 meters tall; flowers purplish. In a thicket on the plains.

Solanum madrense Fernald. A shrub about 2 meters tall; flowers white. Ravine, El Achote.

Solanum nigrum L. In a thicket, river bank.

Solanum nudum L. A shrub about 2.5 meters tall; flowers white. In a thicket near El Rincón.

Solanum Seaforthianum Andr. A climbing, semi-woody vine with very attractive, purple flowers. Cultivated in gardens but collected as an escape on a river bank.

Solanum umbellatum Mill. A shrub 3–4 meters tall; flowers white. River bank.

SCROPHULARIACEAE

BACOPA Aubl.

Bacopa rotundifolia (Michx.) Wettst. In a swamp.

BUCHNERA L.

Buchnera pusilla HBK. An herb; flowers violet. In an old, wet pasture.

ESCOBEDIA Ruiz & Pavón

Escobedia laevis Cham. & Schlecht. Herb; flowers white. In wet grassland. The genus is new for Honduras.

ILYSANTHES Raf.

Ilysanthes inaequalis (Walt.) Pennell. Corolla blue at the base, becoming white toward the edges. In a subalpine bog near El Achote.

LENTIBULARIACEAE

UTRICULARIA L.

Utricularia mixta Barnh.? In a marsh.

Utricularia pusilla Vahl. Corolla golden yellow. In a marshy, alpine meadow near El Achote.

BIGNONIACEAE

AMPHILOPHIUM Kunth

Amphilopium pilosum Standl., sp. nov.—Frutex scandens, ramis quadrangulatis densissime pilis patentibus fulvis pilosis, internodiis elongatis; cirrhi pilosi apice breviter trifidi; folia 3.5–4.5

cm. longe petiolata, petiolulis 3–4 cm. longis dense longipilosis; foliola 2 membranacea rotundato-ovata vel late ovato-elliptica 8–12 cm. longa 5.5–9 cm. lata abrupte breviter acuminata, basi breviter cordata vel truncata, supra viridia sublucida sparse vel dense pilis simplicibus pilosa, subtus fere concoloria molliter, ad nervos densius, patenti-pilosa, basi 5–7-nervia, nervis pallidis prominentibus, venulis laxe reticulatis, inter venas dense minute glanduloso-puncticulata; flores purpurascentes in cymas trifloras dispositi, cymis racemosis pedunculatis, paniculis angustis usque 25 cm. longis angustis, ramis densissime fulvo-pilosis, flore centrali cymae breviter crasse pedicellato, lateralibus longipedicellatis; calyx pro genere typicus extus dense pilosus ca. 8 mm. longus, lobis late rotundatis intus minute puberulis; corolla 2.5 cm. longa extus glabra.—Honduras: Climbing in thicket along river bank on plains near Siguatepeque, Dept. Comayagua, 1,050 meters, July 25, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6683* (type in Herb. Field Mus.). Also, from the same region, July 8, *No. 5738*.

Two other species of the genus found in Central America are conspicuously unlike the present plant in having fine, stellate pubescence.

GESNERIACEAE

ACHIMENES P. Br.

Achimenes grandiflora (Schiede) DC. Corolla purple; stems red. Rocky hillside.

Achimenes longiflora DC. Flowers attractive, blue. Rocky hillside.

BESLERIA L.

Besleria laxiflora Benth. A shrub 1–2 meters tall; corolla scarlet. In a wet ravine near El Achote.

COLUMNEA L.

Columnea pilosissima Standl.? Creeping on a rotten tree trunk. Near the shore of Lake Yojoa.

Columnea rubricaulis Standl., sp. nov.—Frutex subscandens epiphyticus ramosus, ramis crassis ferrugineo-rubris subteretibus, novellis dense foliatis pilis longis adpressis albis pilosis, internodiis brevissimis; folia inter minora in sicco subcoriacea, petiolo crasso vix ultra 3 mm. longo adpresso-piloso; lamina lineari-oblonga 3.5–5.5 cm. longa ca. 8 mm. lata apicem angustum versus sensim atte-

nuata, basi paullo obliqua obtusa vel subacuta, supra in sicco cinereo-viridis opaca glabra, costa impressa, nervis obsoletis, subtus pallidior, sparse pilis brevibus albidis adpressis pilosa vel fere glabra, ad costam crassiusculam pilis longioribus albidis et ferrugineis intermixtis adpresso-pilosa, nervis obsoletis; flores axillares, pedicellis ut videtur rubris ad 2 cm. longis dense pilis rubescentibus longis adpressis pilosis; calyx ca. 1 cm. longus, sepalis lanceolato-ovatis vel lanceolatis longe anguste attenuato-acuminatis integris vel subundulatis rubro tinctis sparse adpresse pilosis; corolla non visa.—Honduras: Climbing on a tree in forest near the summit of the range above El Achote, in the cloud zone, above the plains of Siguatepeque, Dept. Comayagua, 1,850 meters, August 1, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6255* (type in Herb. Field Mus.).

CORYTHOLOMA Dcne.

Corytholoma Warscewiczii (Bouché & Hanst.) Standl. Corolla orange. Rocky hillside.

ACANTHACEAE

DYSCHORISTE Nees

Dyschoriste oaxacensis Kobuski. In an old, wet meadow.

PLANTAGINACEAE

PLANTAGO L.

Plantago Galeottiana Dcne. In a clearing above El Achote.

RUBIACEAE

ANISOMERIS Presl

Anisomeris protracta (Bartl.) Standl. A shrub or small tree up to 6 meters tall; flowers white or pale yellow. River bank.

Anisomeris rudis Standl., sp. nov.—Arbor 9-metralis, trunco 12–15 cm. diam., ramis gracilibus subteretibus fusco-ferrugineis, novellis dense pilis patentibus vel adscendentibus lucidis ochraceis pilosis, internodiis brevibus; stipulae deciduae lineari-subulatae erectae pilosulae; folia modica breviter petiolata crasse membranacea, petiolo crassiusculo 8–10 mm. longo dense patenti-piloso; lamina ovato-oblonga vel anguste elliptico-oblonga 7–11.5 cm. longa 2.5–5 cm. lata longe sensim anguste acuminata, basi acuta vel acuminata et saepe plus minusve decurrens, supra in sicco laete viridis sublucida sparse breviter pilis albidis hirsuta, inter venas dense transverso-lineolata, subtus concolor, densiuscule praesertim ad nervos

patenti-pilosula, ad axillas dense albido-barbata, costa gracili prominente, nervis lateralibus utroque latere 6–9 obliquis prominentibus gracillimis, nervulis subimpressis; inflorescentiae axillares solitariae capitatae vel cymulosae graciliter 1.5–2.5 cm. longe pedunculatae dense pauciflorae, pedunculo dense patenti-piloso, floribus sessilibus vel brevissime pedicellatis; hypanthium claviforme vix ultra 2 mm. longum densissime patenti-pilosulum, calycis lobis linearibus vel oblongo-linearibus attenuatis extus pilosulis intus glabris 1.5–3 mm. longis subpatentibus.—Honduras: In forest near the summit of the ridge above El Achote, in cloud zone, above the plains of Siguatepeque, 1,800 meters, August 1, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6253* (type in Herb. Field Mus.).

The most closely related species is *Anisomeris protracta* (Bartl.) Standl., a frequent species in Honduras, which differs in having closely appressed pubescence and very short, blunt calyx lobes.

BORRERIA Meyer

Borreria fruticosa Standl. A shrub about 60 cm. tall; corolla white. In pine forest near El Achote. Known only from this region.

CEPHAELIS Sw.

Cephaelis axillaris Sw. A shrub about 1 meter tall; flowers white. In forest near the summit of the range above El Achote.

Cephaelis elata Sw. A small tree 4.5–6 meters tall and 5–8 cm. in diameter; bracts red. In a deep, wet ravine near El Rincón. New for the flora of Honduras.

CHIOCOCCA P. Br.

Chiococca alba (L.) Hitchc. A somewhat scandent shrub; corolla golden yellow. In a thicket near Lake Yojoa.

Chiococca phaenostemon Schlecht. A tree about 4.5 meters tall and 5–8 cm. in diameter; perianth green. In a wet ravine near El Achote.

COCCOCYPSELUM P. Br.

Coccocypselum hirsutum Bartl. Flowers and fruit blue. Creeping in wet soil on a rocky hillside.

CRUSEA Cham. & Schlecht.

Crusea calocephala DC. Flowers purple. In wet soil in pine forest.

DECLIEUXIA HBK.

Declieuxia fruticosa (Willd.) Kuntze, var. **mexicana** (DC.) Standl. Corolla white. In pine forest near El Achote.

DIODIA L.

Diodia brasiliensis Spreng. var. **angulata** (Benth.) Standl. A shrub about 30 cm. tall; flowers white. Between rocks on a river bank.

GONZALAGUNIA Ruiz & Pavón

Gonzalagunia panamensis (Cav.) Schum. A shrub about 1.5 meters tall; flowers white. Near the shore of Lake Yojoa.

HAMELIA Jacq.

Hamelia patens Jacq. A shrub 3–4 meters tall; flowers orange to red. River bank.

HOFFMANNIA Sw.

Hoffmannia angustifolia Standl. Climbing in trees at the bottom of a ravine near El Achote.

Hoffmannia gesnerioides (Oerst.) Kuntze. A low, sprawling shrub; fruit scarlet, pulpy. On forest floor near El Rincón. A rare species, new to Honduras, known also from Nicaragua.

Hoffmannia nebulosa Standl., sp. nov.—Frutex metralis sparse ramosus, ramis gracilibus teretibus viridescentibus vel subochraceis, internodiis brevibus vel elongatis, novellis sparse vel densiuscule villosulis; stipulae parvae deciduae; folia modica petiolata membranacea, petiolo gracili vulgo 1–3 cm. longo dense breviter villosulo; lamina obovato-oblonga 10–16 cm. longa 4–6.5 cm. lata abrupte breviter cuspidato-acuminata, basin versus sensim angustata, basi ipsa acuta, supra in sicco laete viridis sparse vel ad nervos dense villosula cito glabrata, subtus paullo pallidior, ad costam nervosque densiuscule pilis longioribus villosa, aliter sparse brevissime villosula vel fere glabra, costa crassiuscula prominente, nervis lateralibus utroque latere ca. 1 angulo lato saepe fere recto adscendentibus arcuatis; flores in axillis fasciculati pauci, pedicellis fructiferis vix ultra 2 mm. longis villosulis; baccae juvenes oblongae 5 mm. longae paullo ultra 2 mm. latae glabrae basi obtusae; calyx ad apicem baccae persistens 0.6 mm. longus breviter acute dentatus.—Honduras: In forest near the summit of the range above El Achote, in the cloud zone, above the plains of Siguatepeque, Dept. Comayagua, 1,850 meters, August 1, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6252* (type in Herb. Field Mus.).

"Flowers green," but no corollas, at least, are present on the two sheets of type material. Like most species of *Hoffmannia*, this exhibits no outstanding characters, unless in the sessile, few-flowered inflorescence. It differs in several respects from all the too numerous species that have been described from Central America.

PALICOUREA Aubl.

Palicourea Galeottiana Martens. A tree about 6 meters tall and 7–8 cm. in diameter; branches of the inflorescence golden brown. Ravine near El Achote.

PSYCHOTRIA L.

Psychotria crebrinervia Standl. A shrub about 2 meters tall. Side of a ravine near El Achote.

Psychotria erythrocarpa Schlecht. A shrub about 1.5 meters tall. In a ravine near El Achote.

Psychotria involucrata Sw. A shrub about 1 meter tall; flowers greenish; bracts red. In a thicket near the shore of Lake Yojoa.

Psychotria microdon (DC.) Urban. A shrub, somewhat scandent; flowers aromatic. In a thicket near the beach west of Tela.

Psychotria patens Sw. A shrub about 2 meters tall. In a thicket, ravine near El Rincón.

Psychotria trichotoma Mart. & Gal. A shrub about 1.5 meters tall. Bottom of a ravine near El Achote.

Psychotria uliginosa Sw. A shrub about 1 meter tall; corolla pinkish; fruit scarlet. In a deep, wet ravine near El Rincón.

Psychotria Yunckeri Standl., sp. nov.—Subgen. *Mapouria*. Arbuscula 3–4.5 m. alta, trunco 2.5–5 cm. diam., omnino glabra, ramis crassis subteretibus fusco-ferrugineis interdum striatis, internodiis brevibus; stipulae ut videtur primo connatae et calyptriformes caducae ferrugineae oblongo-lineares ad 3.3 cm. longae 3–3.5 mm. latae attenuato-acutae; folia majuscula longiuscule petiolata firme membranacea, petiolo crassiusculo 1.5–3 cm. longo; lamina elliptica vel oblongo-elliptica 10–20 cm. longa 4.5–7.5 cm. lata acuta vel acuminata, basin versus attenuata et interdum subabrupte acuminata atque decurrens, supra in sicco brunneo-fuscescens, costa nervisque conspicuis sed vix prominulis, subtus fere concolor, costa gracili elevata, nervis lateralibus utroque latere ca. 15 angulo latius-

culo adscendentibus parum curvis prope marginem arcuato-conjunctis prominulis, venulis obsoletis; inflorescentia terminalis erecta cymoso-paniculata dense vel sublaxe multiflora crasse 1–2 cm. longe pedunculata vel interdum sessilis 4–6.5 cm. longa et saepe aequilata, ramis basalibus 3 vel numerosis adscendentibus crassis, bracteis parvis caducis, floribus plerumque umbellatis breviter crasse pedicellatis vel sessilibus, pedicellis vix 2 mm. longis; hypanthium obovoideum vix ad 1.5 mm. longum, calyce ca. 1 mm. alto 2–2.5 mm. lato truncato vel obscure remote brevissime denticulato; corolla viridi-alba 5 mm. longa extus glabra fauce albo-barbata, in alabastro apice late obtusa, tubo crasso cylindraceo, lobis ovato-oblongis obtusis aequilongis vel paullo brevioribus; pedicelli fructiferi usque 6 mm. longi; fructus globoso-obovoideus 7 mm. longus, basi obtusus, apice late rotundatus, 5 mm. diam., pyrenis 2 dorso grosse obtuse 6-costatis, facie commisurali anguste leviter canaliculatus.—Honduras: In forest near the summit of the range above El Achote, in cloud zone, above the plains of Siguatepeque, Dept. Comayagua, 1,850 meters, July 21, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6013* (type in Herb. Field Mus.); also *No. 6143* from the same locality. In ravine near El Achote, 1,350 meters, *No. 6118*.

RANDIA L.

Randia aculeata L. A shrub about 2.5 meters tall; flowers white. Near El Achote.

RONDELETIA L.

Rondeletia amoena (Planch.) Hemsl. A tree about 4.5 meters tall. Side of a ravine near El Achote.

Rondeletia buddleoides Benth. A tree about 4.5 meters tall and 10 cm. in diameter. In a dry ravine east of Siguatepeque.

Rondeletia nebulosa Standl. A small tree about 4.5 meters tall and 8–10 cm. in diameter. In forest near the summit of the range above El Achote. The species is confined, so far as known, to Honduras.

Rondeletia strigosa (Benth.) Hemsl. A shrub. Edge of a ravine near El Achote.

CAPRIFOLIACEAE

VIBURNUM L.

Viburnum discolor Benth. A tree about 7.5 meters tall and 15 cm. in diameter; flowers white. Side of a ravine near El Achote.

VALERIANACEAE

VALERIANA L.

Valeriana scorpioides DC. An herb; flowers white. Rocky hillside.

CUCURBITACEAE

LAGENARIA Ser.

Lagenaria siceraria (Mol.) Standl. Flowers white. Climbing in a thicket on river bank about 6 km. north of Siguatepeque. Escaped from cultivation?

LOBELIACEAE

LOBELIA L.

Lobelia splendens Willd. In a subalpine bog near El Achote. Corolla scarlet.

COMPOSITAE

ACHYROCLINE Less.

Achyrocline Yunckeri Blake, sp. nov.—Pl. XVI. Annua paullum erecto-ramosa ca. 6 dm. alta; caulis canescenti-tomentosus; folia ovata v. elliptico-ovata acuta basi cuneata petiolata non decurrentia integra triplinervia supra cinerascentia v. aetate viridescentia tenuiter tomentosa subtus canescenti-tomentosa; capitula 5-flora sessilia glomerato-paniculata; fl. fem. 4, hermaph. 1; involucri scariosi margaritacei phyllaria late ovalia v. oblonga obtusa saepius apiculata.

Erect, leafy annual; stem subterete, striate, pithy, 3 mm. thick below; leaves alternate, the internodes 0.6–2.5 cm. long; petioles slender, essentially unmargined, canescent-tomentose, 3–6 mm. long; blades ovate, elliptic-ovate, or sometimes elliptic, 3.8–6.5 cm. long, 1.8–2.4 cm. wide, acutish or the lower ones sometimes obtuse, dark-callous-apiculate, above usually grayish or in age greenish, rather thinly tomentose and beneath the tomentum puberulous with short, thick, several-celled hairs (from which the long hairs of the tomentum arise), not glandular, beneath densely and persistently canescent-tomentose, papery, pliable, erectish to spreading or in age marcescent and reflexed, the upper gradually reduced to lanceolate or elliptic bracts 1.8–3 cm. long; panicle terminal, flat, with about 3 principal branches, many-headed, 7 cm. wide, pubescent like the stem, the bracts subulate, 5 mm. long; heads sessile, glomerulate, oblong-ovoid (moistened), about 4.2 mm. long, 2 mm. thick; involucre about 4-seriate, strongly graduate, 4.2 mm. high, scarious, pearly white,

the phyllaries about 9–11, the outermost broadly oval, 2.8–3 mm. long, 1.5–1.8 mm. wide, obtuse or rounded, sometimes apiculate, the others oblong, obtuse to subtruncate, abruptly apiculate, all with greenish, stipitate-glandular, and more or less tomentose midline below; pistillate corollas nearly equaling the style, whitish, filiform, 3 mm. long, minutely 5-toothed, puberulent at the apex with clavate, subglandular hairs; disk corolla apparently brownish at the apex, 3.5 mm. long (tube 1 mm., throat slender, 2 mm., teeth triangular, acute, puberulous with clavellate hairs, 0.5 mm. long); achenes oblong, light-colored, glabrous, 0.5 mm. long; pappus deciduous, of barely serrulate, white bristles, 3 mm. long.

HONDURAS: On a wet cliff near El Achote, hills above the plains of Siguatapeque, Dept. Comayagua, alt. 1,350 meters, July 15, 1936, *T.G. Yuncker, R.F. Dawson & H. R. Youse 5872* (type No. 1,637,728, U. S. Nat. Herb.).

The closest relative of this species, *Achyrocline deflexa* Robins. & Greenm., of Oaxaca, has longer and relatively narrower, lanceolate or oblanceolate leaves with the petiole less abruptly demarked from the blade and margined or winged to the base, and the phyllaries, varying from obtuse to acute, are indistinctly or not at all apiculate.

AGERATUM L.

Ageratum conyzoides L. A common weed in waste places.

ASTER L.

Aster bullatus Klatt. Rays white. River bank.

BACCHARIS L.

Baccharis glutinosa Pers. A small tree about 6 meters tall and 7–8 cm. in diameter. On a river sandbar.

Baccharis trinervis (Lam.) Pers. A shrub about 2 meters tall. Thicket on plains.

BIDENS L.

Bidens pilosa L. var. **radiata** Sch. Bip. A very common weed.

CHAPTALIA Vent.

Chaptalia nutans (L.) Polak. Rays purplish or white. In wet, rocky soil in pine forest.

COSMOS Cav.

Cosmos crithmifolius HBK. Rays pink. River bank.

ERIGERON L.

Erigeron jamaicensis L. In a moist pasture.

Erigeron spathulatus Vahl. Rays white. River bank.

EUPATORIUM L.

Eupatorium ivaefolium L. Corolla lavender. In an old pasture.

Eupatorium ligustrinum DC. A shrub about 2.5 meters tall. Edge of a ravine near El Achote.

Eupatorium macrocephalum Less. In an old pasture.

Eupatorium morifolium Mill. A tree about 6 meters tall and 10 cm. in diameter. In a wet ravine near El Achote.

GALEANA Llave

Galeana pratensis (HBK.) Rydb. A common weed.

HIERACIUM L.

Hieracium hondurense Blake. Rays yellow. In wet soil, in pine forest.

MELAMPODIUM L.

Melampodium brachyglossum Donn. Sm. A common weed.

MIKANIA Willd.

Mikania Tonduzii Robinson. Sprawling over shrubs in a wet ravine near El Achote.

ORTHOPAPPUS Gleason

Orthopappus angustifolius (Sw.) Gleason. Corollas pale lavender. In an old pasture.

PECTIS L.

Pectis sp. Rays yellow. In short grass of an old pasture.

PEREZIA Lag.

Perezia nudicaulis Gray. Flowers white. On a rocky hillside.

POLYMNIA L.

Polymnia maculata Cav. Stems 2.5–3.5 meters tall; leaves up to 45 cm. long; corollas yellow. About 6 km. north of Siguatepeque.

Polymnia oaxacana Sch. Bip. Stems about 1.2 meters tall; rays orange-yellow. River bank.

SENECIO L.

Senecio arborescens Steetz. A small tree about 4.5 meters tall and 8 cm. in diameter; leaves fleshy. Side of a ravine near El Achote.

SONCHUS L.

Sonchus oleraceus L. Side of a trail about 6 km. west of Siguatepeque.

TAGETES L.

Tagetes filifolia Lag. Rays white, shading to yellow in the throat. In pine forest near El Achote.

Tagetes Schiedeana Less. Rays orange; very aromatic. In wet soil, border of a banana plantation.

TRIDAX L.

Tridax procumbens L. Rays buff. In wet soil near Potrerillos; also on a rocky hillside near Siguatepeque.

VERBESINA L.

Verbesina vicina Blake, sp. nov.—Pl. XVII. Arbor parva, ramis strigillosis glabratis; folia alterna majuscula obovata breviter acuminata basi longe cuneata petiolata crenato-mucronulata pergamentacea utrinque viridia supra asperule hirsutula pilis basi ima lepidotis, subtus non dense hirsutula; capitula minuscula aurea radiata cymoso-paniculata vix numerosa; radii ca. 5 mm. longi; achaenia latiuscule alata.

"Small tree about 4.5 meters tall and 5–7.5 cm. in diameter"; branches usually densely strigillose or subappressed-hirsutulous, in age glabrescent or glabrate, subterete, wrinkled-striatulate, wingless, the younger greenish, the older gray-barked, 3–4 mm. thick; petioles rather slender, flattish above, rounded beneath, strigillose or erectish-hispidulous especially above, 1–1.8 cm. long, not auriculate or decurrent; blades obovate, (7–) 11.5–23 cm. long, (3–) 4–7.5 cm. wide, usually rather abruptly short-pointed with an acute, callous-tipped apex, rarely obtuse, crenate-mucronulate above the entire, cuneate base (teeth 8–12 pairs, 5–20 mm. apart, the mucro callous, about 0.4 mm. high), above deep green, somewhat shining, roughish, evenly but scarcely densely hirsutulous with subappressed or antrorse hairs with lepidote but scarcely or not tuberculate base, densely hirsutulous on the costa, in age glabrescent and inconspicuously lepidote-maculate, beneath scarcely lighter green, evenly but not densely

hirsutulous or substrigillose with inconspicuously lepidote-based hairs, feather-veined, the costa prominent beneath, the chief lateral veins 8–10 pairs, prominulous beneath, curved-ascending; cymes or cymose panicles axillary, subterminal, much surpassed by the leaves, about 3–10-headed, 1.5–3.5 cm. wide, convex, densely erect- or ascending-pilosulous, the peduncle about 1.5 cm. long, the pedicels slender, 5–17 mm. long, the bracts minute; heads about 1 cm. wide; disk campanulate, 8–10 mm. high, 5–8 mm. thick (as pressed); involucre 3–4-seriate, 4.5–6 mm. high, appressed, the phyllaries rather few, very unequal, graduate, the outermost minute, ovate, the others oblong or ovate-oblong, 0.8–1.2 mm. wide, with pale, somewhat indurate, about 2-ribbed base and longer or shorter, greenish tip, all obtuse, loosely and not densely pilosulous and short-ciliate; rays 4, yellow, pistillate, the tube spreading-pilosulous, 1.8 mm. long, the lamina oval, 3-dentate, 9-nerved, 5.5 mm. long, 3.3 mm. wide; disk flowers not very numerous, their corollas yellow, hirsutulous on the tube and base of throat, otherwise glabrous, 4.7–5.2 mm. long (tube 0.8–1 mm., throat cylindric, 3.5–3.7 mm., teeth 4 or 5, ovate, papillose-margined, obtuse, 0.5–0.7 mm. long); pales rather broad, several-vittate, sparsely pilosulous, thinner and greenish toward the obtuse, erect or very slightly spreading tip, about 5 mm. long; disk achenes cuneate-obovate, 4.8 mm. long, 3.2 mm. wide (including the wings), the body narrowly obovate, blackish, sparsely hirsute above with partly tuberculate-based hairs, 4.5 mm. long, 1.8 mm. wide, the thin, whitish wings (probably not fully mature) dentate-ciliate, 0.6–0.8 mm. wide; awns 2, unequal, linear-lanceolate, acuminate, sparsely hirsutulous-ciliolate, somewhat divergent, 2.2–3.2 mm. long, adnate dorsally to the wings at the base.

HONDURAS: In a ravine, bank of a stream near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, alt. 1,350 meters, July 17, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 5907* (type No. 1,637,745, U. S. Nat. Herb.).

In range and characters this species is intermediate between *V. pleistocephala* (Donn. Sm.) Robinson, of Guatemala, and *V. Oerstediana* Benth., of Costa Rica. The inflorescence of the specimens examined (including those retained by Dr. Yuncker) is probably dwarfed and not representative of the species in its full development. In *V. pleistocephala* the leaves are only about half the size of those of *V. vicina*, usually sharply serrate or serrulate, and extremely rough above with strongly tuberculate-based but scarcely lepidote hairs. In *V. Oerstediana* the leaves are smooth to the touch above

and there usually glabrous (except along the puberulent costa), or sometimes sparsely pilosulous.

Verbesina Oerstediana Benth. (in Oerst. Vidensk. Medd. 1852: 96. 1852) was recorded as one of the most characteristic plants on the southern slopes of Mount Irazú, Costa Rica, at 8,000–9,500 feet altitude. The type at Kew is labeled as from 9,000 feet; a photograph and fragments from this sheet are in the U. S. National Herbarium, which also possesses a sheet collected by Oersted bearing essentially the same data and presumably belonging to the type collection. Bentham described the branches as well as the panicle as villous; Robinson & Greenman (Proc. Amer. Acad. 34: 558. 1899), who had examined only *Pittier 11583*, from Irazú (the altitude given on the specimen of this number in the U. S. National Herbarium is 2,900–3,000 meters; Robinson and Greenman give the altitude as 2,000–2,500 meters [about 6,500–8,200 feet], which may be due to an error in labeling) called them lanate. In the specimen of *Pittier 11583* in the U. S. National Herbarium the branches and petioles are villous-lanate, and the panicle correspondingly pubescent; the pubescence on the Oersted specimen, although much weathered, has been essentially the same. The leaves were described by Bentham in his diagnosis as pilosulous above, loosely villous beneath, in his fuller description as scabriusculous above, at length nearly glabrate. The leaves are essentially the same in all three specimens above cited—at first evenly but not densely pilosulous above with hairs that are not at all or only very slightly tuberculate-thickened at the base, and smooth to the touch, in age glabrate or glabrescent above.

Eight other collections from Costa Rica that have been referred to *V. Oerstediana* are in the U. S. National Herbarium, all collected in the provinces of San José and Cartago by Paul C. Standley, and all, with a single exception, from altitudes of 1,500–1,900 meters. In all these plants the pubescence of the branches and panicle is much less conspicuous, shorter, and usually sparse, varying from strigillose to spreading-pilosulous. They appear to represent a distinct variety of lower altitudes, which may be called

Verbesina Oerstediana var. **glabrior** Blake, var. nov.—Rami novelli et paniculae sparse v. dense strigillosa v. strigosa, vel interdum pilosula pilis adscendentibus v. subpatentibus; folia supra glabra v. subglabra, subtus sparse v. sparsissime pubescentia.

COSTA RICA: Province of San José: Moist woods, Cerro de Piedra Blanca, above Escasú, Jan., 1924, *Standley 32489*; moist forest,

between Aserrí and Tarbaca, alt. 1,600–1,900 meters, Feb., 1924, *Standley 34142;* open slope, Cerro de Las Vueltas, alt. 2,700–3,000 meters, Dec., 1925–Jan., 1926, *Standley & Valerio 43504;* oak forest, vicinity of Santa María de Dota, alt. 1,500–1,800 meters, Dec., 1925, *Standley 41619* (type No. 1,252,372, U. S. Nat. Herb.); Dec., 1925–Jan., 1926, *Standley & Valerio 43448.*—Province of Cartago: Wet forest, Cerro de La Carpintera, alt. 1,500–1,850 meters, Feb., 1924, *Standley 35715, 35728;* wet forest, La Estrella, March, 1924, *Standley 39429.*

VERNONIA Schreb.

Vernonia melanocarpa (Gleason) Blake. A shrub about 3 meters tall. In a thicket on river bank.

WEDELIA Jacq.

Wedelia parviceps Blake. Stems more or less woody at the base; rays yellow. In a thicket on river bank.

ZEXMENIA Llave

Zexmenia frutescens (Mill.) Blake, form. A shrub 1.5–2 meters tall. In a thicket on the plains.

Zexmenia perymenioides Blake, sp. nov.—Pl. XVIII. Arbor parva; rami tenues hispiduli et strigillosi etiam patenti-hispidi; folia elliptico-lanceolata acuminata basi acute cuneata petiolata serrulata triplinervia supra aspere hispida et hispidula, pilis basi tuberculatis, subtus pallidiora hirsuta et hirsutula; capitula 3 terminalia pedunculata foliis breviora radiata aurantiaca, pedunculis strigillosis; involucri 3-seriati paullum gradati phyllaria exteriora oblonga strigosa apice herbaceo ovato acuto squarroso, interiora angustiora scariosa; achaenia immarginata tuberculato-hispidula; pappi arista 1 tenuis achenio paullo brevior, squamellae ca. 2–3 saepius ovatae ca. 1 mm. longae.

"A small tree about 15–20 feet (4.5–6 meters) tall and 3 inches (7.5 cm.) in diameter"; branch hexagonal, 2 mm. thick, sparsely branched, greenish, rather densely hispidulous with spreading or reflexed hairs and in places strigillose, also rather densely hispid with wide-spreading, slightly tuberculate-based hairs about 1 mm. long, the pubescence especially dense at the nodes; petioles slender, essentially naked, pubescent like the branch, 3–9 mm. long; blades 6–8.5 cm. long, 1.8–2.7 cm. wide, rather shortly falcate-acuminate with an acute, callous-tipped apex, serrulate above the subentire, cuneate base, firm-papery, above deep green, not shining, evenly

but scarcely densely hispid and hispidulous with tuberculate-based, antrorse hairs, beneath lighter green, on the veins densely and rather softly hirsute with spreading to subappressed hairs, on the surface evenly hirsutulous with spreading to subappressed hairs, triplinerved 3–10 mm. above the base, in age with the smaller veins impressed above, prominulous-reticulate beneath; peduncles 3.5 cm. long or less, very slender, densely strigillose, 1-headed; heads 2.5 cm. wide (as pressed); disk campanulate, about 12 mm. high, 8 mm. thick (as pressed); involucre campanulate, impressed at the base, 3–4-seriate, slightly graduated, 10 mm. high, the phyllaries rather few, those of the 2 outer series together 6–8, oblong or oblong-obovate, 1.5–2.8 mm. wide, with indurate (in the inner greenish-centered, scarious-margined) base and shorter, ovate or lance-ovate, usually acute or acuminate, rarely obtusish, squarrose, herbaceous tip, densely strigillose on their exposed surface below, more sparsely so and indistinctly ciliate on the herbaceous tip, those of the inner series linear-oblong, obtuse, scarious, erose and usually ustulate at the tip, appressed, strigillose along the midline; rays 8, fertile, the tube very sparsely subglandular-puberulous above, 3.3 mm. long, the lamina oval, tridenticulate, 12–14 mm. long, about 8 mm. wide, short-hirsute on the back on the 2 chief nerves and finely hispidulous at the apex, about 17-nerved; disk corollas golden yellow, glabrous except for the sparsely hispidulous, papillose-margined teeth, 8.7 mm. (tube 3 mm., throat slender-funnelform, 4.5 mm., teeth ovate, 1.2 mm. long); pales narrow, scarious, acuminate, often with a lateral tooth on each side below the apex, ciliolate toward the tip, sparsely hispidulous on the midline above, about 11 mm. long; ray achenes narrowly cuneate, 5.5 mm. long, 1.7 mm. wide, trigonous, keeled on the inner face, somewhat rounded and 1–3-nerved on the outer, wingless and marginless, blackish brown, evenly but not densely tuberculate-hispidulous, not obviously contracted at the apex, their pappus of 3–4 lanceolate (rarely linear) to ovate or obovate, mostly acuminate, hispidulous-ciliolate squamellae or paleae, 0.8–1.5 mm. long, that on the inner angle sometimes aristiform and 3.5 mm. long; disk achenes narrowly cuneate, 5–5.3 mm. long, 1.2–1.5 mm. wide, compressed-quadrangular, normally with 1 nerve between each pair of angles, marginless and wingless, slightly rounded at the apex but not at all necked, blackish brown, sparsely tuberculate-hispidulous, their pappus rather persistent, of 1 narrowly lanceolate, long-acuminate, hispidulous awn about 4.5 mm. long (on the inner angle),

and 2–3 slender-subulate to ovate, acute, hispidulous-ciliolate, free squamellae 0.5–1.3 mm. long, or the latter lacking.

HONDURAS: In a wet ravine near El Achote, hills above the plains of Siguatepeque, Dept. Comayagua, alt. 1,350 meters, July 26, 1936, *T. G. Yuncker, R. F. Dawson & H. R. Youse 6099* (type No. 1,637,729, U. S. Nat. Herb.).

This species is strikingly suggestive of *Perymenium* in all features except the achene and pappus. Its closest ally is clearly *Z. aurantiaca* Klatt, of Costa Rica. In that species, of which two sheets of the type collection (*Tonduz 9836* and its equivalent, *J. D. Smith 7071*) are before me, the stem and branches are closely strigillose without any spreading hairs, the leaves are ovate and much broader (only twice as wide as long), and the heads are somewhat thicker and on longer peduncles. In essential characters of achene and pappus the two species are very similar, although no achene examined has the pappus squamellae as large as on some of the achenes of *Z. perymenioides*. W. W. Jones (Proc. Amer. Acad. 41: 161. 1905 ["A revision of the genus *Zexmenia*," Contr. Gray Herb. 30: 161]) thought that *Z. aurantiaca* might not be a *Zexmenia*, and suggested that the pappus somewhat resembled that of *Perymenium*. The species, however, is certainly a *Zexmenia*, although it was probably improperly placed in the subgenus *Auchenocarpa* by Jones. His description of the pappus as of "very fragile plumose awns, generally only one as long as the body, and several unequal bristle-like squamellae," although based on Klatt's type, gives a very misleading notion of the pappus actually present in this species. The ray achenes are 3-angled, those of the disk 4-angled (this feature reversed in his description), tuberculate-hispidulous, and very closely similar to those of *Z. perymenioides* above described. The pappus in the ray achene consists of a very slender, fragile, hispidulous awn 5 mm. long, slightly dilated at the base, on the inner angle, a similar but much shorter awn (1.8 mm. long) on each of the outer angles, and about 5–6 lanceolate, hispidulous squamellae 0.5–1 mm. long, the whole slightly connate at base. The disk achene bears one very slender, fragile, hispidulous awn 5 mm. long, sometimes paleaceous-dilated at the base (probably representing connation with 2 squamellae), and about 6–12 mostly lanceolate, hispid-ciliate squamellae, the latter shortly but distinctly connate at the base.

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TYPICAL VIEW ALONG THE ROAD IN THE INTERIOR OF HONDURAS

a

VIEW OF SIGUATEPEQUE, HONDURAS

b

HAND-SAWING PINE LOGS INTO BOARDS FOR USE IN LOCAL CONSTRUCTION

LYCOPODIUM ARCANUM MAXON
Type specimen; natural size

ANTHURIUM BASIATTENUATUM STANDLEY

Type specimen; one-third natural size

ANTHURIUM LUCENS STANDLEY

Type specimen; one-third natural size

857684
HERBARIUM
FIELD MUSEUM
PLANTS OF THE REPUBLIC OF HONDURAS, C. A.
No 5935
Date 7/17/35
Spadix dark red, spathe and peduncle light red. Bottom of ravine near El Achote, hill above the plains of Siguatepeque. 1300 m. altitude.

ANTHURIUM YUNCKERI STANDLEY

Type specimen; one-third natural size

THECOPHYLLUM MONTANUM L. B. SMITH

Type specimen; one-third natural size; details of flower natural size

PLANTS OF THE REPUBLIC OF HONDURAS, C. A.
No5934
Date 7/17/3
Epiphyte. Bracts a flash pink. Leaves green, tips recurved. In ravine near El Achote, above the plains of Siguatarequa. 1350 m. altitude.
GRAY HERBARIUM
HARVARD
UNIVERSITY

TILLANDSIA GLOSSOPHYLLA L. B. SMITH

Type specimen; one-third natural size; details of flower natural size

TILLANDSIA LAMPROPODA L. B. SMITH

Type specimen; one-third natural size; details of flower natural size

TILLANDSIA YUNCKERI L. B. SMITH

Type specimen; one-third natural size; details of flower natural size

PIPER FAVICULIFERUM TRELEASE

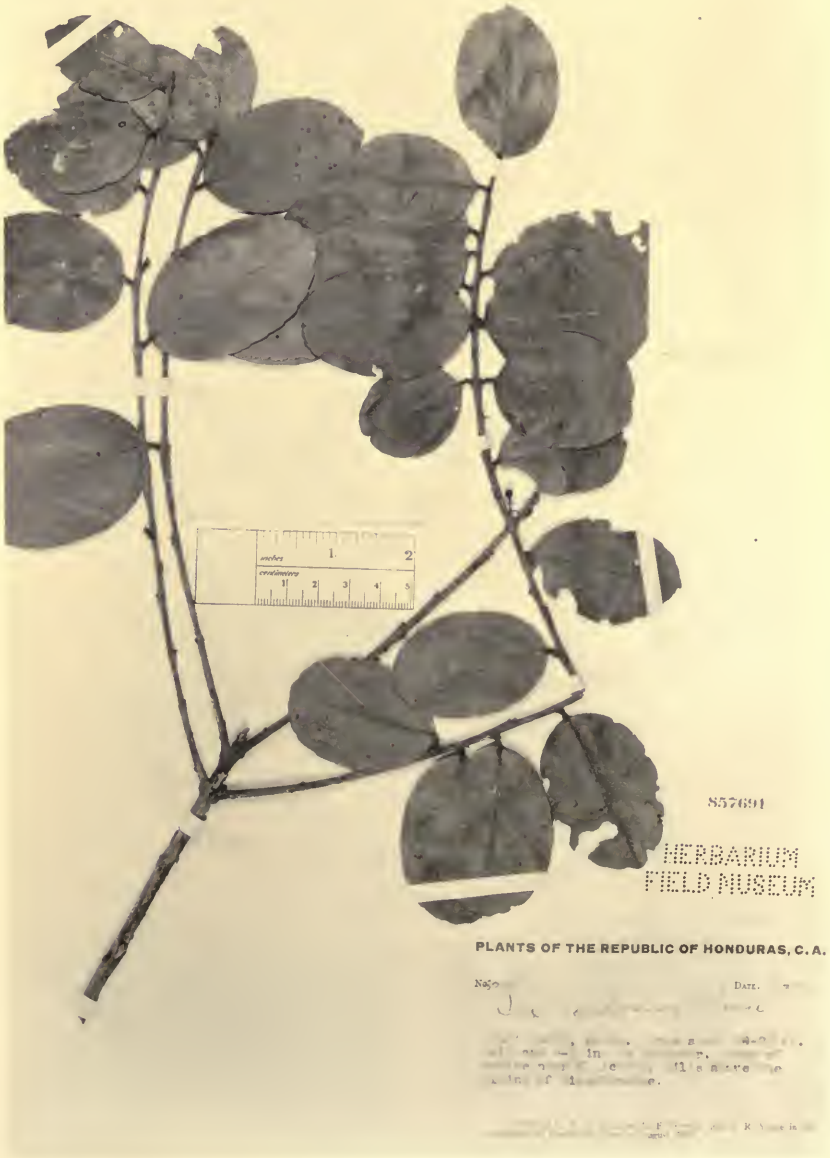
Type specimen; one-third natural size

CALLIANDRA ARBOREA STANDLEY
Type specimen; one-third natural size

857673
HERBARIUM
FIELD MUSEUM
PLANTS OF THE REPUBLIC OF HONDURAS, C. A.
No. 5793
Desmodium luteolum Standl.
Flowers greenish-yellow. On rocky hillside
Collected by T. G. Yuncker, R. F. Dawson and H. R. Youse

DESMODIUM LUTEOLUM STANDLEY

Type specimen; one-third natural size



ILEX HONDURENSIS STANDLEY

Type specimen; one-third natural size

BEGONIA YUNCKERI STANDLEY

Type specimen; one-third natural size

ACHYROCLINE YUNCKERI BLAKE

Type specimen; one-third natural size

VERBESINA VICINA BLAKE

Type specimen; one-third natural size

ZEXMENIA PERYMENIOIDES BLAKE

Type specimen; one-third natural size

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